Good Food and Nutrition

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GOOD FOOD
AND
NUTRITION

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GOOD FOOD
AND
NUTRITION

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for young people and their families

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TO BEGIN WITH

This book, *Good Food and Nutrition for Young People and Their Families,* is an attempt to answer the questions many young people like yourself are asking about the application of nutrition to everyday living.

The food interests of young people are essentially no different from those of other people. You, like everyone else, select your own food in one way or another every day. Many of you carry important home and community responsibilities. You prepare meals for your family, you look after younger brothers and sisters, you help buy or produce your family's food, you work part-time in a soda fountain or other eating place. Consequently, many of you are just as concerned about nutritional problems affecting your family, your community, and your country as you are about those affecting yourself.

Just because of the wide variety of situations in which a knowledge of nutrition is important to young people and their families, the authors found themselves talking to mothers, fathers, industrial workers, office workers, business men and women—to everyone concerned about his own, his family's, and other people's nutrition.

Nutrition is a science in which new facts are con-

stantly discovered. You have to be on your toes to keep up-to-date in this important field.

Because nutrition is a science, it is sometimes hard for the ordinary person to translate scientific food facts into the realities of everyday eating—into meals. Scientists have helped us do this by giving us simple listings of the foods we need every day to be well nourished. One of these listings, which is known as the basic seven, includes foods that are available in most sections of the country. It is simply a translation of scientific facts into a simple, usable scheme that even the most unscientific can understand.

But even when we understand what we should eat, we often fail to get the proper food. This is not because we don't want to eat right, but because we do not apply what we know to our own lives.

Good Food and Nutrition portrays real people meeting real food problems and working out good solutions in terms of their own situations. It does not attempt to give you ready-made solutions to your food difficulties. It simply gives you the basic material needed in solving them. You will need to work out your own solutions—to apply this material in your own life. In doing so, you may arrive at certain principles which you can use in many different situations. And in the process you may see something in the experiences of the people in this book—the Bradshaws, the Martins, the Proctors, the Varicks—that will help you. Sometime you may say, "Why, I could do that myself." If

you do, *Good Food and Nutrition* will have achieved its purpose.

Thus, *Good Food and Nutrition* is not a collection of data or a detailed report of the outcomes of research projects. Rather, it is an account of how the principles of good nutrition may help you eat right so that you can be strong and well, how these principles affect your practices in marketing, cooking, gardening, and preserving foods, and how your attitudes, habits, prejudices, and emotions affect your eating. Thoughtful young people everywhere will be able to think of other applications of this all-important subject—the science of nutrition—and to make them in their own lives.

It is the hope of the authors that this book will in a small way lead many young people to a better understanding of the importance of good nutrition for everyone in the world.

E. P. A.
D. E. B.
V. V. D.

PREFACE TO TEACHERS

You are a teacher or a group leader. You have the hard but important task of helping other people learn how to eat enough of the right kind of foods for health, strength, and mental alertness.

You know that people must learn to eat right if they are to be well fed. Yours is the job of making this learning as practical and interesting as possible. It will take much imagination and ingenuity on your part.

Good Food and Nutrition, when used under the guidance of a wise teacher, will help young people to discover their own food difficulties, will give the basic information which they will need to do something about them, and will encourage them to work out good solutions.

When used in schools, *Good Food and Nutrition* may suggest to young people the things that are keeping them and their families from getting the right foods.

Inevitably teachers like yourself will find that some of the food problems of young people are highly individualistic; others are common to many. The laboratory facilities for studying these problems may be found in the school, the home, and the community.

Schools with good equipment and space for cooking and serving food can make it possible for boys and girls

to see food prepared and—what is vastly more important—to prepare good food themselves and eat it.

When a number of young people find they need help with similar problems, the laboratory facilities of the school may be used for a group project, different members of the group working on different aspects of the same problem.

Since so many food problems need to and should be worked out in a home setting, every young person has the possibility of working on a problem there. You may find your teaching extending beyond the walls of your classroom and into the home and the community.

Even when young people's problems differ widely, they gain much from group experiences. Under the impetus of the group, the individual will go forward to solutions of problems in his home or in his community, both giving help to and receiving help from the members of the group.

When you teach nutrition, don't forget the contribution your fellow-workers can make to the job. The social science teacher may contribute to the consideration of food from the economic and social point of view, the agriculture teacher can give invaluable help on gardening, the health teacher can interrelate health and food. Even the music teacher may have something to give.

Remember, two heads are better than one, and three or four or five are better than two. You can add much to the richness of your teaching by drawing your co-workers into the picture.

Food is not only a personal but also an economic and a social problem. It affects our homes, our communities, and our country. And teachers must help young people to appreciate this fact. On how well you and thousands like you succeed in doing this may depend the final solution to the problem of supplying "all men with sufficient healthful food." Yours is indeed an important task!

E. P. A.
D. E. B.
V. V. D.

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Some have come indirectly.

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LET'S EAT RIGHT

1. THIS MIGHT BE YOU

You work in an office. You work in a factory. You are a high school senior. You clerk in a store. You are a brakeman on a railway. You drive a truck or a taxi. You look after the neighbors' children. You are a farmer's daughter. You practice in a court of law. You teach school. You mine coal. You are a young housewife. You are a secretary. You are the mother of a five-year-old child. You are the child's brother.

You live on every highway and byway. You live on every main street. You live in the suburbs. You live on the boulevard. You live along country roads. You live in mansions and in tenement houses. You are of every race, creed, and color.

You are an average American living in an average American community. And, like many average Americans, you are concerned about what you eat for breakfast, for lunch, for dinner. You want your food to help you keep strong and well. You want sound information about food which you can use in your own living. So do many other people.

Suppose you listen in for a few minutes on a public opinion poll—a poll conducted in a town about like

your town, by young people about like the young people you know. Perhaps you may even recognize yourself and your problems in the problems reported by the people on the streets of this town—the town of Newberry.

First the young people stop a young Italian-American girl. In response to the question, "Do you think you have a food problem?" she says, "My problem is, How can I do the work at home, get the meals, take care of my mother, who is sick, and still go to school? My father thinks that I should quit school, but I want to have an education so that I can become a teacher. I just can't give up going to school!

"There are eight children in our family, and I'm the oldest. My little sister, who is ten, and my two oldest brothers, who are eleven and twelve, are able to help some, but I have to do all the planning and most of the work. I'd certainly like to know what to feed my mother, too. I really need help badly."

A lanky seventeen-year-old boy answers, "Food problem? Sure! The guys call me Skinny. I'm too thin. I want to know how I can gain weight." His chum, a sixteen-year-old boy, answers seriously, "My father is dead, and my mother and I live alone. She works hard all day and is very tired when she comes home. If I knew how to cook, I could get supper, and my mother could rest."

Next, Dave stops a middle-aged man who is dressed in overalls—one of America's many night workers. In response to Dave's question he frowns and says, "Do I

have a nutrition problem? Nutrition means something about food, doesn't it? Yes, I do, and a mighty serious one. Or at least I think it's serious. You see, I work on the night shift down at the power plant. I'm on my way home now. Lately I've only been able to drink coffee for breakfast or, as I suppose you people who work in the daytime would call it, supper. Day and night—they're just the same to me.

"In the middle of the night I eat in the lunchroom near the plant with other workers, and I hear them talk about what they eat outside the plant. Lately I've wondered . . . how much do we, or anyone else, know about the kinds of food that will keep us fit? How does night work affect our eating? Some of us are always catching colds and being absent. A few of us have had accidents. Do you think it could be because we don't eat a decent meal from one week's end to the other? I've been reading some articles in the paper, but I can't figure out whether we eat right. I'm sure I have many food problems—all night workers have, but there doesn't seem to be anything to do about it."

The next person questioned is a young bank clerk, James Hildebrand. He smiles and answers, "I buy all the family's food because my wife doesn't have time now that we have three small youngsters. Sally and I are always running out of money, and I've begun to suspect it's because I'm a poor food shopper. I surely would like to find out how to buy our food more sensibly."

Then the pollers stop Fred Taylor, the editor of the *Newberry Times.* "A food problem? Well, I have so many problems that I certainly must have one that might be described as a food problem. Let's see. Oh, yes. I often get so busy working on a story for the paper that I clean forget to go out to lunch. I always figure that skipping a meal won't hurt me any because I'm overweight. I'd certainly like to know for sure, though. Sometimes I don't feel so good!"

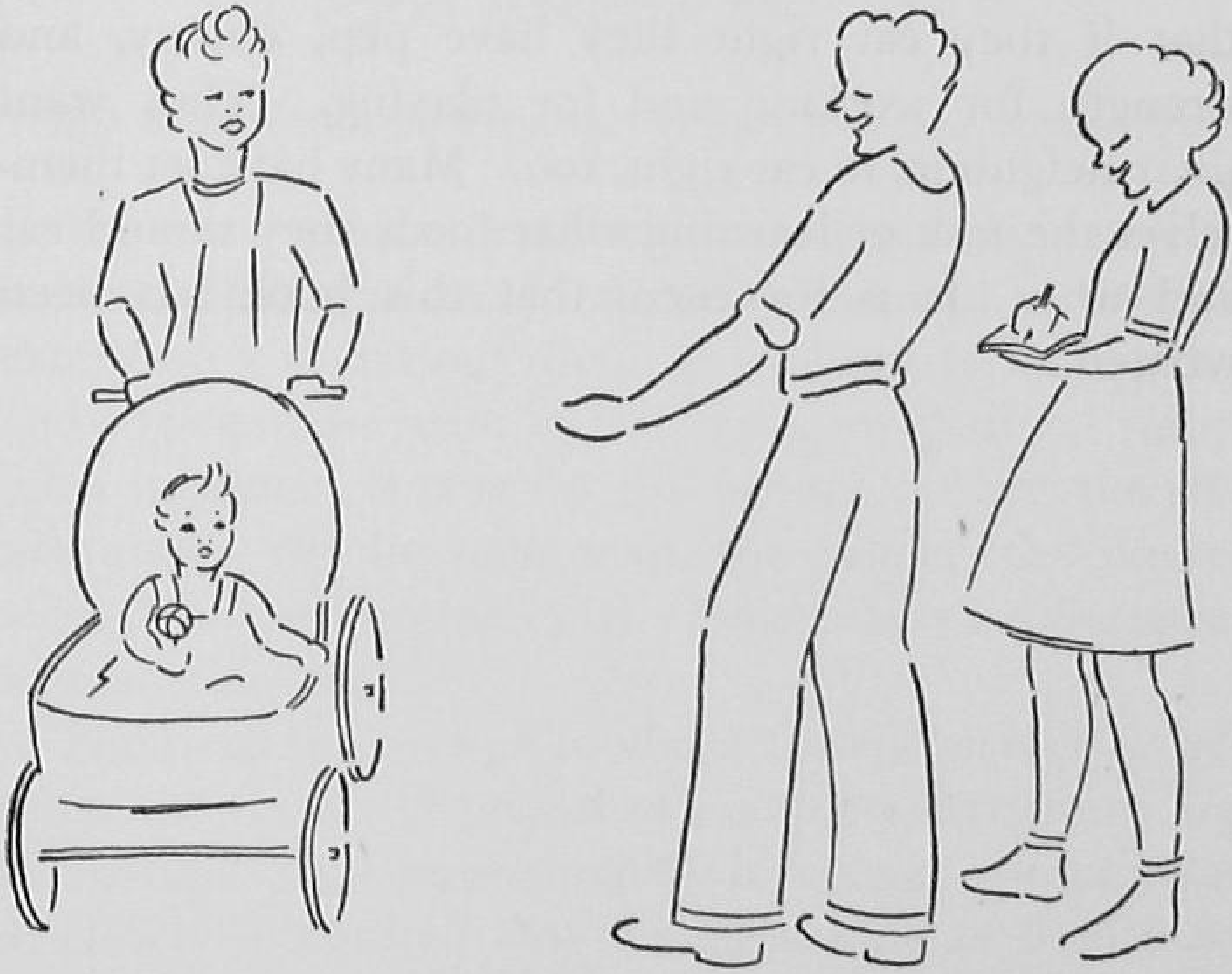
"I'm secretary to Mr. Oscar Levering, the president of the First National Bank," began the next young woman who was stopped. "You wouldn't expect me to have a food problem, would you? But I do. I eat most of my meals at Benson's cafeteria, and I'm never sure just what I should select to get the food that I need. Someone ought to tell office girls how to eat. I know that many of us do a mighty poor job of selecting our food."

Finally a woman with a sturdy little child in a baby carriage approaches. Surely she has no food worries. "A food problem? Say, young fellow, I have one right here in this baby buggy. Every time I give him egg—and the doctor says he must have egg—he spits it out. The more I coax, scold, or spank, the harder it is to get the egg down. Do I have a food problem! I'll say I do! I'm on my way to see the doctor about it now."

By this time you have probably decided that food problems are pretty common and pretty important,

too. And you are right! Almost everyone is faced by them eventually.

Armed with the best information the science of nutrition has to offer, the average person like yourself



A food problem?

finds that he can do a lot about his food problems, that much depends upon his own determination and ingenuity in coping with them. But without such knowledge, he is lost in a wilderness of misinformation and hearsay.

Everyone needs to know and to be able to use certain basic nutritional facts. Such knowledge is part of well-informed and enlightened citizenship. Yet

food is more than an individual problem. Whether each of the citizens who pass the corner is well fed is a matter of concern to each of the others. And it's important also to people who live half the world away!

Many Americans have grown to appreciate the fact that if they eat right they have pep, energy, and strength for working and for playing. They want their neighbors to eat right, too. Many have set themselves the task of learning what foods they should eat and why. It is for them that this book has been written.

2. FOOD MAKES A DIFFERENCE

What Every Intelligent Person Wants to Know About Food

EVERYONE'S sense of well-being, his joy in being alive, and his ability to work effectively depend to a large extent on a nutritious diet. If we want to be healthy and strong, if we want to feel right, we must eat right. This statement is true for the factory worker, the stenographer, the business man, the farmer, the housewife, the school boy and girl. Food makes a difference, a great difference.

The need for *enough* food has always been clear because the results of partial or complete starvation are so obvious. But unfortunately it has not always been so clearly recognized that the right *kind* of food is as important as the right amount.

Although the meal planner in the home does not need to be a chemist, she does need to know some of the facts food chemists have discovered if she is to understand the principles involved in planning nutritious meals for her family. If she plans her meals wisely and well, she may knit the fabric of good health for her family right in the kitchen of her home.

There are people, however, who are not interested in the *why* of selecting foods. They are interested only

in the *how*. If you are one of them, you should turn directly to Chapter 3, Checking Up on Your Food. This chapter is not for you.

ABOUT THE ENERGY FOODS

Automobiles and human beings are alike in one way. They both need fuel to provide energy for the work to be done. Gasoline is the fuel for the auto. Food is the fuel for the body.

For both the automobile and the body, the energy supplied by the food can be measured. The number of miles per gallon is the standard for the car. The calorie is the measure of the energy value of our food—actually, it is a measure of the heat (energy) released by the food when it is burned in the body. This fact simply means that a spoonful of honey, which contains about 100 calories of energy when burned or oxidized in the body, will release that amount of energy to be used in bodily activities.

.The actual determination of the energy value of a given food is very time-consuming, a job for the scientist. However, you will find his calculations of the amount of various kinds of food yielding 100 calories very useful in your study of your own nutrition, for with these you can estimate the calories you are getting in your own diet. For example, a lunch of a small glass of milk, a slice of bread and butter, and an apple gives you about 400 calories. A table of 100-calorie portions of some of the most common foods follows.

Food	*100-Calorie Portions*
Bread	2 medium slices
Butter	1 tablespoon
Breakfast cereals	⅔ to ¾ cup cooked; 1¼ cup flaked; 2¼ cups puffed
Cheese	1⅛-inch cube
Cream, light	¼ cup
Egg	1½ medium
Fruits, fresh	1 large apple or orange; 1 average-sized banana; 2 medium peaches or pears; ½ grapefruit
Fruit, dried	5 to 6 halves of apricots; 6 small prunes
Meat, lean; frankfurter	1 medium serving; 1 frankfurter
Milk, whole; skimmed; chocolate	⅝ cup whole; 1⅛ cup skimmed; ¼ cup chocolate
Nuts	Peanuts, 20 meats; walnuts, 8 meats
Peanut butter	1 tablespoon
Sugar	2 tablespoons
Vegetables	½ cup mashed potatoes or 1 medium potato; ½ cup corn; 1 cup peas or onions; 1½ cups beets or carrots; 2 cups asparagus, cabbage, greens, tomatoes

The calorie needs of a person, that is, his need for energy from food, depends largely upon his size and age and the amount and strenuousness of his activity. Again, for our convenience, science has given us the daily calorie requirements per pound of body weight.

	Calories per Pound
Children	
Under 2 years	40 to 50
2 to 5	36 to 40
6 to 9	32 to 36
Boys	
10 to 13	30 to 40
14 to 17	23 to 30

	Calories per Pound
Girls	
10 to 13	27 to 30
14 to 17	18 to 27
Adults	
Very little physical activity	16 to 18
Moderate physical activity	18 to 20
Heavy muscular work	23 to 27

Let us compare a four-year-old boy and his moderately active father. The father weighs 154 pounds and needs from 18 to 20 calories per pound of body weight, or approximately 3,000 calories per day. The boy weighs 40 pounds and needs from 36 to 40 calories per pound, or 1,600 calories a day. Although the lad weighs only one-fourth as much as his father, he requires more than half as many calories. In proportion, children have greater energy needs than adults.

Now let's compare this father, requiring 3,000 calories, with his seventeen-year-old son, who weighs 140 pounds and requires 27 calories per pound of body weight, or a total of 3,780 calories. Adolescent boys who are growing rapidly and who are extremely active require more food than even men.

You can now determine your own calorie needs. Did you satisfy these needs yesterday? Check the food you had yesterday with the first tabulation, and then find your requirements on the second.

Foods differ in fuel value. Fats are the richest source of energy, yielding from two and one-fourth to four times as much energy as certain other foods. Carbohydrates and proteins have about the same fuel

value. Carbohydrate is the technical name for starches and sugars. From the standpoint of cost, carbohydrates are our cheapest source of energy, fats are second, and proteins third.

Actually, only those who are decidedly overweight or underweight need to count calories in the average day's diet. With youngsters or anyone else who is very active, the chief problem is to get a plentiful supply.

The foods which are good sources of energy include:

Breads and Cereals	*Fats*	*Starchy Vegetables*	*Sweets*
Breads (whole-grain or enriched)	Butter	Potatoes	Sugar
Cereals (whole-grain or restored)	Cream	Dried beans	Molasses
Crackers	Cheese	Dried peas	Syrup
Macaroni	Fats of meats		Honey
Spaghetti	Lard		Preserves
Rice	Salt pork		Jellies
Hominy	Bacon		Candy
Tapioca	Oleomargarine		Cake
	Peanut butter		Cookies
	Chocolate		Desserts
	Nuts		Pie
	Olive oil		

THE BODY BUILDERS AND REPAIRERS

Any person who has driven an automobile for any length of time knows that parts must be replaced occasionally and that repairs must be made. The wise automobile owner provides for the necessary replacements or repairs.

In our bodies, too, "wear and tear" is constantly going on. Unlike the automobile, our bodies themselves make the necessary replacements if food is prop-

erly selected to include tissue-building elements, such as proteins, minerals, and vitamins.

PROTEINS

Proteins are often called the building blocks of the body. They are needed not only for the construction of new body tissues during growth but also for the maintenance, renewal, and repair of the body throughout life. Everyone must have them for life, for growth, and for upkeep. Almost all foods contain some proteins; many foods furnish considerable amounts.

Proteins are constructed of amino acids. Ten of these amino acids are absolutely indispensable because they cannot be made by the body. Some foods contain all these; some foods contain some of them.

Any food containing all ten is called a complete protein food. These foods are meat, poultry, and fish, milk, cheese, eggs, peanuts, soybeans.

There are other good protein foods which are incomplete: milled or whole-grain cereals, dried beans and peas, and dried lentils. When they are included in the diet as a source of protein, we should use them in conjunction with complete proteins. For example, when cereals are served with milk, the protein in the milk supplements the protein in the cereal. This is also the reason why you should serve extra amounts of milk, cheese, and eggs when legumes are served in place of meat. These foods are usually cheap and have a real place in everyone's diet.

Normally, a grown-up will be safeguarded, as far as his protein requirement is concerned, if he has each day one pint of milk plus two generous servings of any of the complete proteins—meat, fish, eggs, cheese, soybeans, and peanuts. These amounts of these foods will furnish about two-thirds of the amount of protein needed each day. The proteins from breads, cereals, and other vegetable foods will be needed to make up the remaining one-third.

Children and young people need an additional amount of milk (one quart) if they are to meet their requirements.

MAKING THE MOST OF THE MINERALS

Many minerals are found in the body and must be replenished by the foods we eat. Four stand out, however, as the most important because they are the ones which are apt to be deficient in the average American diet: calcium, phosphorus, iron, and iodine.

Our tissues will not grow without these minerals. Like proteins, they are needed for body building.

Calcium and phosphorus. Everyone knows that in order to build a good house one must start with sufficient material of the right kind and quality to make a strong foundation. This rule holds equally true in building strong bodies and good health for boys and girls.

Calcium, together with phosphorus, is an essential material needed for such a foundation. Growth of good bones and sound teeth depends largely upon these

minerals. If the child does not get enough calcium and phosphorus, he may become bowlegged, knock-kneed, or pigeon-breasted because his bones are soft. In other words, he develops rickets.

Adults also need calcium to keep their bones and teeth healthy and strong. A pregnant woman or a nursing mother needs an extra supply if she is to furnish material for blood, bones, and teeth to her baby.

It is important for us to realize that milk and milk products are the principal food sources on which most Americans must depend for an adequate supply of calcium. A grown person usually supplies about 70 per cent of his need for calcium if he drinks two glasses of milk a day. Since a child is still growing, he needs the calcium from three or four glasses of milk a day.

The following foods contain good amounts of calcium: milk, American cheese, cauliflower, cabbage, collards, and other green leafy vegetables, molasses, dried beans, oranges, grapefruit, turnips, carrots, oysters, and eggs. Three or four of these calcium-rich foods should be included in the diet every day. *The day's calcium quota of the average adult will be met if he has one pint of milk, one serving of a leafy green vegetable, and one serving of beans. Children need more milk.*

Phosphorus is needed to combine with calcium in building bones and teeth and with protein in forming cells. Foods that are rich in protein usually are rich in phosphorus.

Good sources of phosphorus are: milk, beans, cottage cheese, fish, oysters, liver, American cheese, beef, rolled oats, eggs. If you watch your intake of calcium and protein, your supply of phosphorus will more or less take care of itself.

Iron. Iron has a vital part to play in the well-rounded diet, since it builds red blood cells, which in turn carry oxygen to all the tissues of the body. This oxygen is needed to convert the food we eat into energy.

If we do not have enough iron, our blood cannot perform this vital function. The following foods are rich in iron: liver, sweetbreads, kidney, heart, lean beef, veal, chicken, molasses, egg yolks, dried beans and peas, raisins, dates, dried fruit, greens, oysters.

To get enough iron, you need two or three iron-rich foods each day. These might be as follows: one serving of meat, a leafy vegetable, and four slices of whole-wheat bread; or one serving of liver and one serving of a whole-grain cereal; or one serving of a leafy vegetable, one egg, one serving of dried peas, and one serving of whole-grain cereal.

Iodine. Iodine has assumed a position of greater importance in the nutritional picture since it has been discovered to be a preventive of simple goiter, an enlargement of the thyroid gland.

Iodine is found in sea water and sea spray. Consequently, drinking water and foods raised in seacoast areas contain iodine in sufficient quantities. But there is practically none in inland areas, such as the mid-

western section of the United States. Eating sea fish frequently (once or twice a week) and using iodized salt are desirable practices in such areas.

DRAFTING THE VITAMINS

Although it is impossible to put one's finger on a vitamin, we know that they exist. Man has enjoyed the benefits of vitamins as long as he has eaten. However, it is only during the last few years that he has known much about them.

Vitamins first impressed us because of dramatic deficiency diseases resulting when they were lacking in the diet. A lack of vitamin D, for instance, causes rickets; of vitamin C, scurvy; of niacin, pellagra.

Fortunately, we have progressed beyond the point where we consider vitamins only as preventive elements. Now we know that they are essential for health and growth. They may be thought of as guardians of health, for every one of them is essential to protect and maintain it.

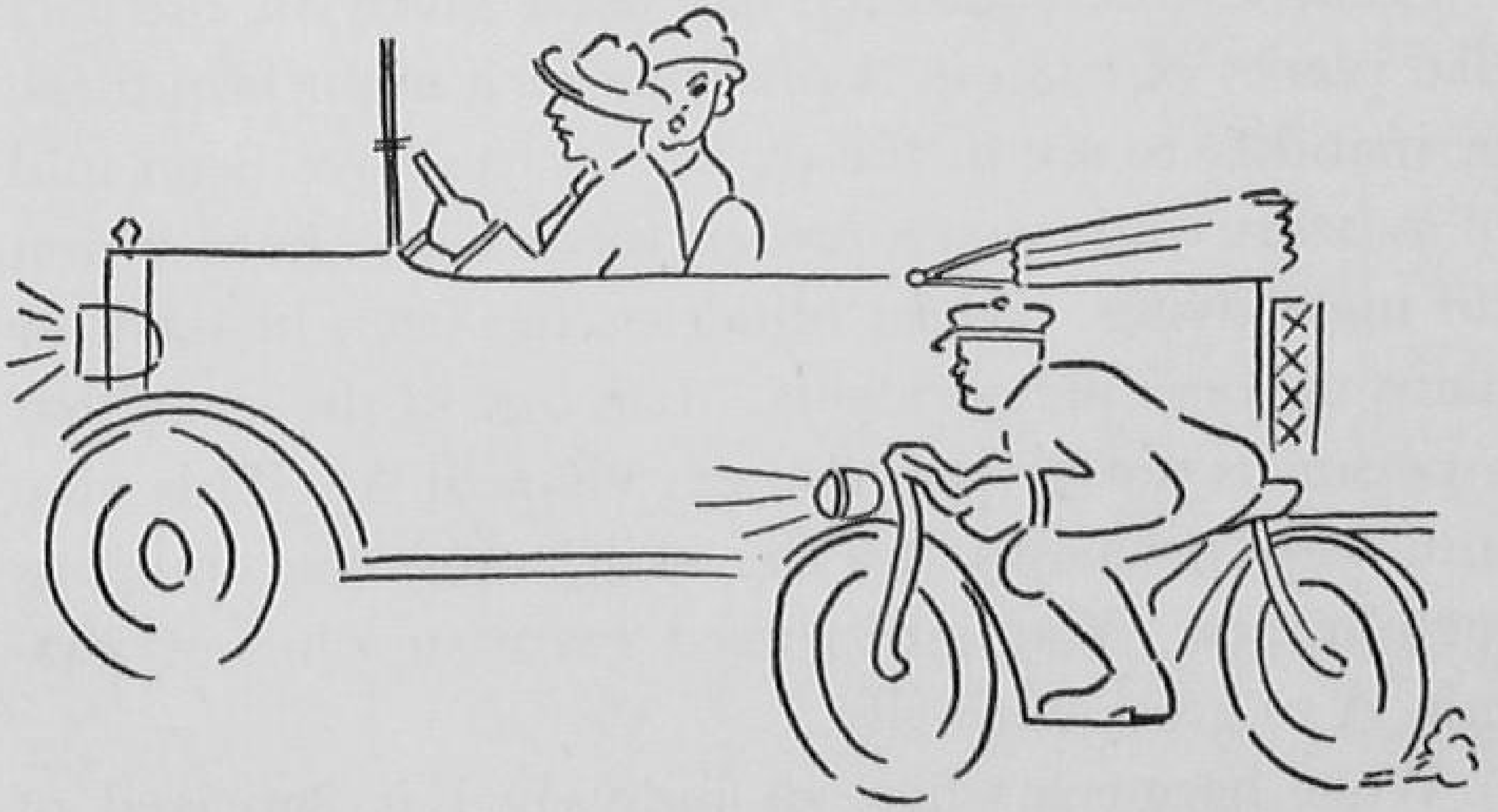
The best-known members of the vitamin family at the present time are A, B_1, riboflavin, niacin, C, and D. Nature, with a great deal of foresight, has seen to it that they are present in foods. Not all foods contain every one, and certain foods are much richer than others in one or two.

Although all the vitamins are equally important, you need more of some than of others. Also, some are harder to get. They perform different tasks in the

body. All this means that you must know about the vitamins and where they are found if you are to make the wisest choice of foods.

VITAMIN A

Tom Blanchard and his wife were on their way home to their farm after an evening in town. Suddenly a



Have you had your green and yellow vegetable?

motorcycle swung out around them and a stern voice called, "What's the matter with you? Do you think you own the road? You're weaving over to first one side and then the other!"

"No, sir. That last car that passed seemed to blind me for a few minutes."

"You'd better slow up and watch out," the traffic cop ordered as he went on ahead.

"This is the last time I'm going to drive home at night," Tom declared to his wife. "I suppose those

other fellows have to use their bright lights, but I can't see a thing after I meet them. No wonder the cop bawled me out. I'm through with night driving!"

"Do you suppose there could be something wrong with your eyes? I can see after we pass a car."

Tom's eyes were all right. He simply was the victim of night blindness. He lacked vitamin A.

Considerable publicity has been given to the fact that plenty of vitamin A prevents such night blindness, or inability to see in the dark. Stories have been told of aviators who munch raw carrots to have keen vision for night flying. Night blindness has been blamed for many automobile accidents. It is one of the signs that a person is not getting enough vitamin A. This vitamin also promotes healthy skin, eyes, and mucous membranes. Youngsters need extra supplies of vitamin A to grow normally.

What happens when an individual is deprived of sufficient vitamin A? Here is an actual experience. At the end of infancy twins of a good family were given two different diets. The only difference was that one received food rich in vitamin A. The other received no foods containing vitamin A.

By the time these twins had reached early youth, the one which had been fed plenty of vitamin A displayed normal growth and development, but the other was stunted, sore-eyed, lacking in vigor and alertness, and generally a pretty poor specimen. Now it so happened that these particular twins were white rats in a nutri-

tion laboratory. But similar results have been observed in human beings.

Fortunately vitamin A is readily available in many foods. And, unlike certain other vitamins, it is not appreciably affected by cooking or storage.

The foods containing vitamin A in greatest abundance are: milk; butter; green leafy vegetables, such as spinach, parsley, turnip greens, kale, broccoli; vegetables that are yellow or orange in color, such as squash, yellow corn, sweet potatoes, tomatoes; cheese; eggs; liver; fruit such as apricots, prunes, and peaches; and cod-liver oil and other fish-liver oils. *A pint of milk furnishes about one-sixth of the day's quota. Green or yellow vegetables and fruits, eggs, cheese, butter or fortified margarine, and other foods are needed to make up the remainder.*

The human system is capable of storing up reserves of vitamin A. If you eat plenty of green and yellow vegetables, milk, eggs, and liver, you are not only profiting at the time but building up increased resistance to see you through the months ahead.

VITAMIN B_1

The original vitamin B has been divided into at least ten parts, comprising the really complex B complex. At this point we are going to discuss the best-known member of the B family, B_1.

Vitamin B_1, or thiamin, is the vitamin which, studies show, is most likely to be low in the American diet. The seriousness of this situation is better understood

when one realizes that this vitamin is often called the morale vitamin, because even a moderate deficiency of it causes a person to be depressed and irritable.

What happens when we have a partial vitamin B_1 deficiency? Nervousness, loss of weight, constant tiredness, chronic constipation, inability to sleep are symptoms of such lack. In the face of such deficiencies, children do not grow properly. Many people who go about their work listless and dispirited need vitamin B_1 but don't realize it.

The relation of vitamin B_1 to appetite is most important. When a person lacks this vitamin he has no interest in food. Vitamin B_1 also has a part to play in helping the body use carbohydrates. The more carbohydrates we use, the more B_1 we need.

Many foods supply vitamin B_1 in small amounts, but we have very few foods which give us large amounts. For this reason we should eat several of the foods supplying vitamin B_1 each day.

Our most important sources of B_1 are: whole-grain and enriched breads and cereals, peanuts, dried beans and peas, green peas, dried soybeans, lean pork and chicken, liver, egg yolk, oysters, fish roe, dried fruits, green Lima beans, brown rice, green leafy vegetables, such as broccoli, collards, spinach, and turnip greens, and all types of nuts. Of somewhat less importance as sources of vitamin B_1 are cabbage, yellow vegetables such as sweet potatoes and carrots, fresh pineapple, potatoes, milk.

It is very difficult to get plenty of B_1 unless the diet includes whole-grain products. To meet your requirement you must have several foods rich in vitamin B_1 every day.

If you serve white bread and overcooked meat and vegetables and finish your meal with cakes and pastries, your diet is bound to be low in vitamin B_1. Although B_1 is not as easily destroyed by cooking as is vitamin C, overcooking does and will destroy it.

RIBOFLAVIN

Riboflavin, another of the B vitamins, helps prevent premature ageing and promotes normal growth and health of nerve tissue, eyes, skin, and hair. Like B_1, it is concerned with the use of carbohydrates by the body.

Many foods contain considerable amounts of this vitamin. For this reason, and because riboflavin is less likely to be destroyed by heat than vitamin B_1, it is easy to choose a diet giving a full quota of riboflavin if there is money enough to buy the right foods. The best food sources are: milk, cheese, lean meat, liver, heart and kidney, nuts of all kinds, green leafy vegetables, green peas, dried soybeans, dried prunes. American diets of middle- and upper-income families are less likely to be deficient in this vitamin than they are in vitamin B_1. It may be difficult to obtain enough riboflavin in low-cost diets.

NIACIN

"Gosh, I'm tired and this skin rash is drivin' me crazy. Besides, ma mouth's sore and ma tongue hurts, and I'm jus' about tuckered out!" complained Ezra Round, a Southern sharecropper, as he entered the lean-to which served as a kitchen.

"You jus' set down and res' yourse'f, Pa. Supper'll be ready jus' as soon as I cain get this corn bread 'n'fat back, 'n'hominy, 'n'syrup on the table," comforted his wife.

"Supper'll make me feel better, I reckon," muttered Ezra.

But it didn't. Nothing would make Ezra feel better except a complete change of diet, for Ezra had pellagra.

Niacin, or nicotinic acid, still another B vitamin, has the rather doubtful distinction of being known as the poor man's vitamin because the disease pellagra, which results from a deficiency of it, so often attacks poor people. This vitamin promotes digestion, helps keep the skin healthy, and prevents nervous irritability. Although formerly known as nicotinic acid, it has none of the qualities of nicotine found in tobacco.

Liver and yeast are the best sources of this vitamin. *To meet the requirement for it, a person needs several foods rich in niacin every day, such as milk, lean meat, salmon, green leafy vegetables, peanut butter, green peas, whole-wheat bread, liver, and kidney.*

VITAMIN C OR ASCORBIC ACID

Do you remember the old brain twister fired at you by teasing adults when you were a youngster: "If you have two apples, two automobiles, and two dogs, how many have you?"

"Six," you shouted back, proud of being so smart.

"Six what?" and there you were.

But here's another riddle—a nutrition riddle. If you have two glasses of orange juice, a can of tomato juice, a cabbage, and a dish of strawberries, what have you?

Today's bright child would answer, "Lots and lots of vitamin C," for these foods are some of the richest sources of this vitamin.

Vitamin C helps prevent infections. It speeds recovery from illness. It helps bruises, cuts, and wounds to heal. It promotes growth.

Because it cannot be stored by the body to any great extent, we must have an adequate supply every day. Practically all fresh fruits and vegetables contribute some vitamin C to the diet. They contribute more when eaten raw, less when cooked.

The best food sources are: citrus fruits, tomatoes, pineapple, strawberries, bananas, green cabbage, potatoes, cauliflower, sweet peppers, asparagus, greens, cantaloupes.

Every day should see every family eating some of the foods rich in vitamin C. The richest sources, which are most readily available, are the citrus fruits, such as lemons, oranges, tangerines, grapefruit.

Another fruit, the tomato, is a good source, although not as rich as the citrus fruits. Usually, though, tomatoes are cheaper than citrus fruits and therefore find a place in food budgets that cannot regularly include citrus fruits.

Cabbage, that once cheap and lowly vegetable, has been raised to the throne of nutritional glory since science has found that this leafy green vegetable is rich in vitamin C. Since vitamin C is destroyed by heat, except in tomatoes, cabbage is naturally at its richest when raw.

Vitamin C is a fickle and unstable vitamin. It will readily join company with either air or water. For this reason, greens or other vegetables should not be left to stand in the kitchen at room temperature, but should be stored in the refrigerator. Fruits or vegetables should not be sliced or chopped ahead of time. Also, vegetables should be cooked in a small amount of water for as short a time as possible, and the water should be used in soups, sauces, and gravies.

One cup of grapefruit or orange juice will provide your daily quota of vitamin C, or part of it can come from other foods. For instance, if you take only a half-cup of orange, lemon, or grapefruit juice and include during the day a green vegetable or a raw vegetable or fruit and a potato, you will be getting your quota of vitamin C.

In making substitutions, however, remember that a cup of tomato juice has about half as much vitamin C as a cup of orange or lemon juice, but that a cup of

pineapple juice has only about one-fourth as much. Raw cabbage is such a good and economical source of the vitamin that its value in winter meal planning can scarcely be overemphasized.

A recent country-wide survey of American eating habits revealed that as a nation we do not eat enough raw salad greens, raw cabbage, tomatoes, or citrus fruits. As your family dietitian, do your bit to help correct this fault.

VITAMIN D

Vitamin D, the sunshine vitamin, helps prevent rickets in growing children. It regulates the body's use of the bone-forming elements—calcium and phosphorus—to build strong bones and teeth.

The richest sources are cod-liver oil, other fish-liver oils, and sunlight. Some good food sources are red salmon, sardines, butter, liver, egg yolk, milk, and other foods fortified with vitamin D.

Because vitamin D is so necessary to the proper building of strong bones and teeth, it is important that children get it regularly from cod-liver oil, irradiated milk, or some other rich source. Two teaspoonfuls of cod-liver oil a day is the usual amount given to children between one and two years old. Older children should continue to take it throughout the years of rapid growth, especially during cold or cloudy seasons.

The important thing to remember about vitamins is this: We must include in our diets every day foods

which contain vitamins A, B_1 (thiamin), riboflavin, niacin, C (ascorbic acid), and D. A rule for abundant health is, "All the vitamins every day."

So far in our discussion, we have been concentrating on *which* food does *what*. Fortunately for our memories and our application of all these food facts, they were summed up in a simple listing for the National Nutrition Program, which will be described in detail in Chapter 3.

Some Questions to Ask Yourself

Why are milk and whole-grain cereals, or milk and enriched bread, such good combinations?

What are several different ways you can include foods rich in vitamin A in children's lunchboxes?

Why should salads of shredded raw vegetables be prepared just before serving?

When citrus fruits or tomatoes are not available, what can the meal planner fall back on to provide vitamin C?

What foods did you eat today to supply iron?

What foods did you eat today that are good sources of energy?

Why do some young people of high school age eat more food than their parents?

Did you get your quota of calcium today? Show how.

What did you eat today to give you your needed proteins? Which of these foods were particularly valuable?

What food values could you get from a peanut butter sandwich on whole-wheat bread and a glass of milk?

If You Want to Know More About Food

Read Bogert, *Good Nutrition for Everybody*, Hawley, *The Art and Science of Nutrition*, McCollum and Becker, *Food,*

Nutrition and Health, MacLeod and Taylor, *Rose's Foundations of Nutrition,* Pattee, *Vitamins and Minerals for Everyone,* Rose, *Feeding the Family,* Sherman, *The Science of Nutrition,* Sherman and Langford, *An Introduction to Foods and Nutrition.* Complete references are given under Some Good References, pp. 311–316.

3. CHECKING UP ON YOUR FOOD

For Everyone Who Wants to Check Up on His Own Food

LIKE most Americans, you prefer the truth straight from the shoulder.

But it's not just because you can take it that you want the truth. When you know the facts you can look at things the way they are and then do what needs to be done.

And if you are doing things wrong, you can stand knowing about your mistakes, too, for then you can do things over and do them right.

Take nutrition and the truth. You want to know whether you and your family are eating what they should, don't you? This chapter will help you find out.

If you go about finding the truth concerning the adequacy of your food in the spirit of curiosity, you may find the process quite enjoyable. At least the Ben Bradshaw family did.

THE ADVENTURES OF THE BRADSHAWS

Let's take a peek into the Bradshaw home and see the family in the process of doing the job. But before we can do that, we will have to go back in our story

to an evening not so long ago. It was about seven o'clock. Ten-year-old Billy was sitting in the living room listening to the radio. His mother and sister were in the kitchen washing the dinner dishes.

BILLY BRINGS HOME A CHART

"Mom, hey, Mom," called Billy Bradshaw. "Come on in and listen to the radio. There's a program about that chart Miss Hawkins showed us this afternoon."

"What chart, Billy?"

"Oh, a chart that showed the kind of food a person should eat every day."

Mrs. Bradshaw came into the living room. "Billy, what was that chart like? Did it show the seven basic food groups?"

"You bet it did, Mom. It showed the seven different kinds of food you're s'posed to eat every day."

"Billy, do you suppose Miss Hawkins has an extra copy of that chart? I'd certainly like to have one. Someone was showing it to me the other day at the P.-T.A. Billy, be sure to ask Miss Hawkins how to get one tomorrow. I think your mother would find it very useful. Now don't forget. You're going to ask Miss Hawkins about it tomorrow."

The next afternoon Billy came bursting into the house. "Here's the chart, Mother. Miss Hawkins had an extra copy and gave it to me to take home to you. She says that she'll be glad to send for more of them if any other mothers want one. Here it is," said Billy,

thrusting a square piece of folded paper into his mother's hands.

Mrs. Bradshaw began unfolding the paper. When it was finally spread out she saw a large chart with a variegated color wheel in the middle, and at the top in bold black letters, "FOR HEALTH . . . EAT SOME FOOD FROM EACH GROUP . . . EVERY DAY." In the center was a picture of a man and woman with two children, above them the caption "U. S. Needs Us Strong," below them, "Eat the Basic Seven Every Day."

"Mother, let me tell you about it. Miss Hawkins explained it to us."

"All right, Billy, go ahead."

Billy almost stuttered in his eagerness to tell his mother. "It's something to tell you if you're eating right. At the top it says if you eat the right food you'll be strong, and America needs you that way. The seven parts of the pie are each a different color. Those pictures around the wheel show us the kind of food we should eat. Look," pointing, "the green part, Group One, says, 'Green and yellow vegetables . . . some raw–some cooked, frozen or canned.' The orange part, Group Two, shows us some vegetables and says, 'Oranges, tomatoes, grapefruit . . . or raw cabbage or salad greens.' Group Three is 'Potatoes and other vegetables and fruits . . . raw, dried, cooked, frozen or canned.' You can have all those different kinds. Group Four is 'Milk and . . . ,' hesitating, 'milk products.' What's a milk product, Mom?"

The Basic Seven Chart.

"I suppose it means cheese and things like that. Let's see what the chart says: '. . . fluid, evaporated, dried milk or cheese.' Those are just different kinds of milk and things that are made out of milk, Billy. Now I'll read the rest of the chart. Group Five is 'Meat, poultry, fish, or eggs . . . or dried beans, peas, nuts or peanut butter.' Group Six is 'Bread, flour, and cereals . . . natural whole-grain or enriched or restored.' Group Seven is 'Butter and fortified margarine (with added vitamin A).'"

"Mom, we could find out if we eat what we're s'posed to. We could, couldn't we?"

"Of course we could." Then, thoughtfully, "Billy, I think it would be a good idea for the whole Bradshaw family to do just that! I'll tell you what. After supper Priscilla, Daddy, you, and I will all try to remember what we had to eat today and see how our diet measures up. Would you like to do that?"

"That would be fun," agreed Billy.

THE BRADSHAWS CHECK ON THEIR DIETS

As soon as the supper dishes were finished, the Bradshaw family gathered around the dining room table. Billy gave each one a piece of paper and pencil.

Mr. Bradshaw said, "For Pete's sake, will somebody tell me what this is all about? Ever since I came home there's been something in the air. Do you know anything about it, Priscilla? What's up?"

"I'm just as puzzled as you are, Daddy," fifteen-year-old Priscilla answered. "I don't understand Billy's sudden concern about food any more than you do.

Usually he says, 'Aw gee, Mom, do I *have* to eat my baked potato?' Tonight he ate his quickly and reminded me twice to eat mine. I don't understand it!"

Mrs. Bradshaw laughed. "You will. Just give Billy time."

Billy cleared his throat importantly. "Now, I want all of you to write down just what you've had to eat today. Put the food down exactly as it was, too."

"What is this, anyway?" his father asked. "A new form of guessing game, or 'button, button, who's got the button'?"

"Ben, you'd better do as your son tells you," said Mrs. Bradshaw, smiling. "You'll find out about it soon enough."

"Well, O.K.! O.K.! If I must, I must, I suppose," replied Mr. Bradshaw. For a few minutes the members of the family were busy recording their food.

"Let's start with Daddy's list," suggested Billy.

"All right, Ben. Let's see it." Then Mrs. Bradshaw turned to Billy. "Billy, you go get the chart. I pinned it up on the kitchen wall."

Ben Bradshaw handed over his list. He had recorded his meals as follows:

Breakfast	*Lunch*	*Dinner*
Buttered toast (white bread)	Ham sandwich (white bread)	Veal chops
Coffee	Apple pie	Baked potato
	Coffee	Kidney beans
		White bread and butter
		Ice cream
		Cake

Billy laughed, "Oh, oh! This isn't going to be so good."

His father responded, "Maybe it isn't the kind of food you like, but it suited me all right. You've got to

Facing family food facts.

remember, too, that I eat my lunches downtown, and I'm always in a hurry."

"Well, I eat mine at school, and that's not so different," Billy insisted.

"And I eat mine at home from whatever happens to be in the ice box. I certainly don't consider that an advantage," declared Mrs. Bradshaw. "Billy, where's the chart? Now let's put down two columns. One we'll head *Dad had,* and the other *Dad didn't have.*"

This is the way the listing looked:

Dad had	*Dad didn't have*
A baked potato for vegetable, and fruit in pie (Group Three)	Green or yellow vegetable (Group One)
Milk in ice cream and cream in coffee (Group Four)	Raw vegetable (Group One)
Meat and kidney beans (Group Five)	Orange, tomato, or grapefruit (Group Two)
Butter on toast, sandwich, baked potato, and bread (Group Seven)	Enough milk (Group Four)
	Bread which was whole-grain or enriched, whole-grain or restored cereal (Group Six)

"Well, your Dad didn't do so well, did he?" said Mr. Bradshaw. "Looks as if I'd had too many breads and cereals and none of them the right kind. And I come up missing, as far as Group One and Group Two are concerned, too. I'll certainly have to do much better than that if I'm going to be a good example for my youngsters. Mom, let's see how the youngsters came out. Do you have your list made out, Priscilla?"

"Yes, here it is, Dad."

"We'll fix Priscilla's list up the same way," said her father, writing rapidly.

Breakfast	*Lunch*	*Dinner*
Oatmeal with milk	Coke	Veal chop
Poached egg	Candy bar	Baked potato
White-bread toast and butter		Kidney beans
Milk		Ice cream
		Cake
		Milk

Priscilla had	*Priscilla didn't have*
Potato (Group Three)	Green or yellow vegetable (Group One)
Milk (2 glasses) and on cereal and in ice cream (Group Four)	Raw vegetable (Group One)
Veal chop, kidney beans, and egg (Group Five)	Orange, tomato, or grapefruit (Group Two)
Whole-grain cereal (oatmeal) (Group Six)	Fruit (Group Three)
Butter on toast and baked potato (Group Seven)	Enough milk (Group Four)
	Enriched or whole-grain bread (Group Six)

"Oh, dear," murmured Priscilla, "I thought it would be better than that, I really did. Tomorrow I'm going to drink my orange juice even though I don't like it too well."

At this last remark Mrs. Bradshaw laughed. "Priscilla, maybe now you can see why I've always urged you to eat more fruit and drink more fruit juices. I think you just have a notion about orange juice. If you drank it more often, probably you'd find you liked it."

"Well," Dad said, "now for Billy's list. Have you got it ready, son?"

"Sure, sure," said Billy. "But I don't think you'll find mine's so good either!"

Breakfast	*Lunch*	*Dinner*
Wheat flakes (whole-grain with milk)	Chocolate milk	Veal chop
Egg	Candy	Baked potato
Sliced orange	Two cookies	White bread and butter
Milk		Two pieces of cake
		Ice cream

"Golly, son, that lunch looks to me as if it was on the sweet side. Now let's see . . ."

Billy had

Sliced orange (Group Two)
Potato (Group Three)
Milk, 2 glasses (1 plain; 1 chocolate), on cereal, and in ice cream (Group Four)
Veal chop and egg (Group Five)
Whole-grain cereal (Group Six)
Butter (Group Seven)

Billy didn't have

Green or yellow vegetable (Group One)
Raw vegetable (Group One)
Fruit (Group Three)
Enough milk (Group Four)
Whole-grain or enriched bread (Group Six)

"Well, at that my list didn't come out as bad as I thought it would," muttered Billy. "I've come as near as anyone else has to eating right."

"Well, it's not very good, even so," declared Priscilla. "You certainly ate a lot of stuff that wasn't good for you."

"I didn't either. I ate my orange, and you didn't."

"That's enough, children," said Mr. Bradshaw. "We're not running a contest. We just want to see how we need to improve. Well, Mom, what about your list?"

"Well, here it is," she responded, placing her list on the table, reluctantly. "I suppose the whole family can find fault with it, particularly when you see what a skimpy lunch I had this noon. I was just too busy to stop and get more." Mother's list was as follows:

Breakfast	*Lunch*	*Dinner*
Coffee	Milk	Veal chop
Orange juice		Baked potato
Egg		Kidney beans
Marmalade		Ice cream
White-bread toast and butter		Cake
		Coffee

Mother had	*Mother didn't have*
Orange juice (Group Two)	Green or yellow vegetables (Group One)
Potato (Group Three)	Raw vegetable (Group One)
Milk and in ice cream (Group Four)	Fruit (Group Three)
Meat, kidney beans, and egg (Group Five)	Whole-grain or enriched bread or restored cereal (Group Six)
Butter on toast (Group Seven)	

"Honestly," declared Mrs. Bradshaw, "I suppose most of the bad things about our diets are my fault. You didn't have a chance to have whole-wheat or enriched bread or green or yellow vegetables. And I certainly should have urged Dad and Priscilla to drink their orange juice and get more milk."

THE BRADSHAWS DECIDE TO DO BETTER IN THE FUTURE

"We'll all try to do better from now on, won't we?" asked Mr. Bradshaw. "There's no reason why Mother should take all the blame, is there? She has really tried her best to get us to eat what we should. Almost every morning she makes oatmeal just for Priscilla, and she's always urging me to eat an egg for breakfast. If the Bradshaw family can keep themselves strong and well by eating right, they're going to do it, aren't they?"

And so we leave the Bradshaws and their future adventures in eating right. Their story is of interest to us only because it shows us how we can check up on our own diets, how we too can have adventures in eating as we should.

YOUR ADVENTURES IN EATING RIGHT

You have discovered that your body has certain food needs. You have considered these needs in terms of proteins, calories, carbohydrates, fats, minerals, and vitamins. You have found that there are few foods that belong in only one of these classifications. Although a food may be especially rich in one nutrient, it may, and usually does, contain others as well. Although this fact makes the problem of including all the food substances in the day's meals somewhat less complex, it is still a difficult task to choose wisely from the hundreds of foods available.

It is difficult, that is, unless we have a pattern or food guide similar to the one used by the Bradshaws. This guide divides the essential daily foods into seven groups, called the basic seven, and is easily used in meal planning.

This simple formula, once learned, can serve as a guide through all the welter of information and misinformation which threatens to turn the application of the newer knowledge of nutrition into a mental headache.

Group One: Green and yellow vegetables—some raw, some cooked or canned—1 or more servings.

Group Two: Oranges, tomatoes, grapefruit or raw cabbage or salad greens—1 or more servings.

Group Three: Potatoes and other vegetables and fruits—raw, dried, cooked, or canned—1 serving of potatoes, 2 or more servings of other vegetables or fruit.

Group Four: Milk and milk products—fluid, evaporated, dried milk, or cheese—at least 1 pint of milk or its equivalent for adults. More for children (¾ to 1 quart).

Group Five: Meat, poultry, fish, or eggs—or dried beans, peas, nuts, or peanut butter—1 serving of meat, fish, poultry, or dried beans or peas, 4 to 7 eggs a week.

Group Six: Bread, flour, and cereals—natural, whole-grain, or enriched or restored. Cereal or bread at each meal.

Group Seven: Butter and fortified margarine (vitamin A added) at each meal.

All of these familiar foods are the backbone of health and growth in every human being. All of them are important. Every day you should eat some foods from each of these groups if you want to be healthy and strong.

For your convenience, we have included the amounts needed of each of the essential groups. This information will enable you to get even a better estimate of the adequacy of your diet than the Bradshaws were able to obtain.

FOOD SUBSTANCES PROVIDED BY THE VARIOUS GROUPS

Now let's see if we can discover the reasons behind the division of the necessary daily foods into the seven

basic groups. To do this we will need to look at the other side of the picture presented in Chapter 2, Food Makes a Difference—the food substances provided by the various groups of the basic seven.

Group One: Green and yellow vegetables. Green and yellow vegetables, as a group, are important as a source of vitamin A in the diet. Vegetables with dark green leaves contain vitamins A, B_1, riboflavin, niacin, and C and iron. Turnip, mustard, water cress, dandelion, and collard greens, and beans are good sources of calcium, as well as of vitamin A and riboflavin. Carrots, sweet potatoes, and other yellow vegetables are also rich sources of vitamin A.

Eat one helping every day. Use some raw, some cooked.

Group Two: Oranges, tomatoes, grapefruit, raw cabbage, salad greens. Vitamin C is found in rich quantities in citrus fruits and in generous amounts in tomatoes, cabbage, and salad greens. Oranges, lemons, and grapefruit are excellent sources of B_1 and good sources of riboflavin and calcium. Tomatoes are only about half as rich in vitamin C as oranges are, but are still excellent sources. They are richer in both riboflavin and vitamin A.

Raw cabbage is not only an excellent low-cost source of B_1 and a good source of riboflavin, but it is also rich in calcium. It has a very low caloric content. Many greens are good sources of vitamins A, B_1, riboflavin, and C. They are also rich in iron.

Eat at least one serving every day. Citrus fruits and tomatoes may be used fresh or canned, as whole fruit or juice.

Group Three: Potatoes and other vegetables and fruits. These foods supply us with many of the vitamins and minerals that we need. Every day we should have at least one serving of potatoes and two or more servings of other vegetables and fruits.

Let's not neglect potatoes, which are one of our best friends, nutritionally, especially when cooked in their skins. Potatoes are high in carbohydrates and low in protein. They are also good sources of vitamin C and iron because they are usually eaten in large quantities. They contain vitamin B_1 and riboflavin. The calories furnished by potatoes are no more fattening than those in other foods. Sweet potatoes are similar in content to Irish potatoes, except that they are a much better source of vitamin A.

Fruits contain varying amounts of iron, B_1, riboflavin, and niacin. Although not as rich in vitamin C as citrus fruits, most fruits in this group contain some vitamin C. Fruits which are yellow in color are excellent sources of vitamin A.

Dried fruits are important foods, too. The difference between them and fresh or canned fruits is that the dried fruits contain considerably more sugar but less vitamin C. They are good sources of iron.

Group Four: Milk and milk products. Milk is our most valuable single food. Whole or skimmed milk, buttermilk, dried, evaporated, or condensed milk, and

cheese are all included in this category, and they can be used in many different forms.

Milk is almost a perfect natural food. A quart of whole milk provides about 650 calories. Its protein provides for the growth of muscles, tissues, and bones; its fat and carbohydrates supply energy. It is rich in calcium and includes phosphorus. It contains vitamins A, B_1, riboflavin, niacin, and some vitamin D. The content of this vitamin in milk is sometimes increased by irradiation. Most American diets could be improved more by increasing the amount of milk used than in any other way.

One-third of a pound of American Cheddar cheese, one pint of undiluted evaporated or condensed milk, or one-quarter of a pound of dry milk has about the same food value as a quart of whole milk. All raw milk should be boiled, pasteurized, or used in cooked foods. The harmful, disease-producing bacteria are killed by these processes, and thus milk is made safer for use. On the average, adults need one pint and children one quart a day.

Group Five: Meat, poultry, fish, or eggs, or dried beans, peas, nuts, or peanut butter. Meat is an unexcelled source of proteins, and these proteins are complete proteins—they furnish all the ten indispensable amino acids. Meats also provide vitamins. For example, lean pork has a high B_1 content; liver contains A, B_1, riboflavin, and niacin.

The number of calories per pound varies widely, beef liver containing about 600 and bacon almost

3,000. Meats, particularly liver, are a rich source of iron. They are an excellent source of copper and one of the richest dietary sources of phosphorus. Liver also contains vitamin A.

There is no one meat that a person must eat. Variety in meat is as advisable as it is in other foods. Meats from poultry are about as nutritious as other meats. Fowl is low in minerals but contains vitamin B_1, riboflavin, and niacin. The principal value lies in its protein and fat.

Fish as a source of protein is one of the best. Sea foods provide needed vitamins and minerals, notably iodine and vitamins A and D, these vitamins being particularly rich in the oil from the livers of such fish as cod, halibut, and shark. Fish, especially canned fish such as salmon and sardines, in which the bones are soft and edible, is a rich source of calcium.

Eggs provide food materials of great value, particularly during periods of greatest growth. They have a high protein content and contain valuable fat, phosphorus, and iron, as well as vitamins A, B_1, riboflavin, niacin, and D. One egg of average size furnishes 70 calories.

When meat, fish, poultry, and eggs are scarce, we can turn to dried peas, beans, and the new soybean products. They are surprisingly satisfying, rich in protein, and adapted to many uses.

Beans are important chiefly as excellent and cheap sources of carbohydrates and vegetable proteins. They are outstanding sources of B_1 and riboflavin and are

rich in calcium, iron, phosphorus, and copper. Soybeans and peanuts furnish the best-quality proteins at a lower cost than meat. Green beans are good sources of A, B_1, C, and riboflavin. Peas are much like beans in their content. They are important as a cheap source of body fuel and proteins. They are also rich in vitamins. When using legumes as the main source of protein in a meal, be sure to include extra quantities of milk, cheese, or eggs. Nuts are protein-rich foods. All the legumes and nuts are excellent sources of minerals and vitamins.

Eat at least one, and preferably two, helpings daily of the foods in this group.

Group Six: Bread, flour, cereals. There is a bountiful supply of grain foods. We'll be able to use them a great deal, even though we are limited on certain other foods.

Cereals form a large part of the world's food supply. Wheat, corn, rye, oats, barley, and rice are the most important. Their principal use the world around is making bread in many forms. That bread is an important food is evident in the many familiar sayings concerning it, such as "Bread, the staff of life" and "A man earns his bread by the sweat of his brow." In many languages the plea, "Give me bread," is taken as being synonymous with, "Give me food."

Without cereals there would be no bread, cake, pies, breakfast foods, griddle cakes, muffins, cookies, doughnuts, and scores of other delicious foods. The use of

whole-grain bread and cereals is recommended because of their valuable minerals and vitamin content. All cereals are rich in carbohydrates and contain minerals, particularly phosphorus and iron, but are low in fat and protein. Whole-grain cereals contain vitamin B_1, and some are irradiated to provide vitamin D.

Refined or white flour is now being enriched with vitamin B_1, riboflavin, niacin, and iron (vitamin D and calcium are optional), so that its vitamin and mineral content is more nearly like that of whole-grain flour. Ask your grocer if the corn meal and grits you buy are enriched.

Eat whole-grain or enriched bread or whole-grain or restored cereal at every meal. Be sure to use only whole-grain or enriched breads and restored cereals.

As important as cereals are, however, it is literally true that "man cannot live by bread alone," for cereals do not provide all the necessary food substances.

Group Seven: Butter and vitamin A-fortified margarine. In most respects, butter and margarine are comparable. Butter supplies more of both vitamins A and D than does margarine unless the margarine has been fortified. Increasingly margarine is being fortified with vitamins A and D. When you buy margarine, be sure to get the fortified product. It is a good spread for bread and can be purchased at a lower cost than butter.

Use fats in moderation, but get at least two tablespoons of butter or fortified margarine a day.

Of course, this dietary pattern, the basic seven, is not the only one by which an adequate diet can be obtained. It is, however, the simplest and most practical pattern that is in reasonable accord with the food habits of the majority of Americans. Use it, and meal planning will take on the excitement of a game, with each of us playing for the health of himself and his family.

The Bureau of Human Nutrition and Home Economics of the Department of Agriculture uses a variation of the basic seven grouping. Some of the seven groups are divided. If you prefer this grouping, you can use it as a check-list instead of the basic seven.

Green and yellow vegetables: Collards, kale, spinach, other greens, cultivated and wild, carrots, peas, okra, green asparagus, broccoli, pumpkin, snap beans, yellow squash, green cabbage.

Serve 6 or 7 times a week on a limited budget; 12 times on a moderate budget.

Citrus fruit, tomatoes: Oranges, grapefruit, tangerines, other citrus fruit, and fresh or canned tomatoes.

Serve at least this often: A child under 4, once a day; an expectant mother, 6 or 7 times a week; a nursing mother, once or twice a day; others in the family, 4 or 5 times a week.

There's more vitamin C in citrus fruit than in tomatoes, so, if you use all tomatoes, use half again as much as the weekly list recommends.

Potatoes, sweet potatoes.

Serve 11 or 12 times a week when on a limited budget; 9 or 10 times on a moderate budget.

Other vegetables, fruit: Beets, cauliflower, cucumbers, corn, onions, sauerkraut, turnips, apples, bananas, berries, peaches, rhubarb, dried fruits—all the vegetables and fruits not included in other groups.

Serve 8 or 9 times a week; 12 or 13 times on a moderate budget.

Milk: Fresh, evaporated, dried, or as cheese, buttermilk, cream, or ice cream.

Use at least this much every day: For a child, 3 to 4 cups; an expectant mother, 4 cups; a nursing mother, 6 cups; other adults, about 3 cups. (A quart of fluid milk makes 4 cups.)

Lean meat, fish, poultry: All kinds, including liver, heart, and other variety meats. Count bacon and fat back in with fats.

Serve 5 or 6 times a week on a limited budget; 7 or 8 times on a moderate budget.

Eggs.

Serve 4 or 5 a week for each person on a limited budget; 5 or 6 on a moderate budget. Use eggs more liberally if you have your own hens, or when eggs are cheap.

Dry beans and peas, nuts, including soybeans and soya products, cowpeas, lentils, peanut butter.

Serve 3 or 4 times a week on a limited budget; 1 or 2 times on a moderate budget.

Flour, cereals: Flour or meal made from any grain (wheat, buckwheat, rye), cooked cereals, ready-to-eat cereals, rice, hominy, noodles, macaroni, breads.

Serve bread at every meal, and also a cereal food once or sometimes twice a day. Whole-grain, enriched, or restored products are best choices.

Fats, oils: Butter, oleomargarine, salad oils, suet, shortening, lard, bacon, fat back, meat drippings.

"Spread" your fats for cooking and table use, so as to make meals appetizing and give them a stick-to-the-ribs quality. You don't need to figure exact servings.

Sugar, syrups, preserves, including any kind of sugar (beet, cane, corn, maple, and brown), molasses or other kind of syrup or honey, jams and jellies, candy.

This variation from the basic seven groups (11 groups), although more difficult to remember, gives you a more accurate measure of the adequacy of your diet.

OTHER FOOD PATTERNS

Another pattern of foods to meet nutritional needs has been set up by the National Research Council. It uses less milk and lean meats than the basic seven and fits into the food habits of certain parts of the United States, particularly the Southern states, better than the first listing.

Turnip greens	1 cup daily
Sweet potatoes	3 cups daily
Peanuts	20 nuts, or 2 tablespoons of peanut butter
Beans or cowpeas	1½ ounces
Tomatoes	1 cup
Corn meal	3 ounces
Enriched flour	3 to 4 ounces
Milk	⅓ quart, either fresh, evaporated, or dried
Lean pork	Small serving 3 to 4 times a week
Molasses, fat, etc.	To complete meals

Possibly the foods available in your community may make still another dietary pattern more feasible. If for any reason you suspect this to be true, go to your doctor, to the home economics teacher in your school, or to the nutrition committee in your community. One of these sources should be able to give you accurate information or tell you where you can get it.

If you are studying nutrition in a class at school, you may want to study the changes that are most needed in the food customarily served in your community to make your food patterns meet good nutritional standards.

By now you understand that if you include in every day's diet foods from each group of the basic seven or its equivalent, you will give your body all the essentials it needs for health.

The old saying, "Variety is the spice of life," when applied to our meals, should be changed to, "Variety in foods is necessary to a good life." It assures a supply of all the essential food substances.

Some Questions to Ask Yourself

Check your own diet against the basic seven. Are there any ways in which you need to improve? Or try checking your day's meals against the other food pattern shown on p. 48. Does your diet fit this pattern?

What are some of the important foods which you have not been using enough of lately? Can you plan a day's meals including these?

Make a list of the green and yellow vegetables that you could get or grow in your town each month of the year.

If You Want to Know More About Checking on Your Own Food

See Bogert, *Good Nutrition for Everybody,* Baxter, Justin, and Rust, *Our Food,* Bradley and Loggans, *Nutrition Simplified.* Complete bibliographical descriptions of these books will be found under Some Good References, pp. 311–316.

4. THREE SQUARE MEALS A DAY

For Those Who Get Them and Those Who Select Them

If you were to take a trip around your neighborhood, spending a day in each home, you probably would find wide differences in the meals served. The Jones family have bacon and eggs for breakfast, whereas the Thompsons have fruit and toast. The Maxwells have dinner at noon; the Randalls have theirs at night. The Whites invariably have chicken for Sunday dinner; the Robinsons prefer ham. The Lees eat a leisurely breakfast together; the Petersons eat in a hurry. The Larsons always serve Swedish bread because Mr. Larson's parents came from Sweden; the Musaks feel that life is incomplete without "fruit soup." And so it goes in almost any neighborhood. All these variations in food customs can be kept, and still good nutritious meals may be served every day.

Nutrition is more than just knowing facts. To make the three meals a day give each member of the family all he needs requires cooperation on the part of all. Nutrition may be neglected, not because you and your family do not know the principles underlying good nutrition, but because you do not make adequate plans to provide for it, or your meals are not "good to eat."

This means that you will need to consider the day's food in terms of the three meals served.

Most American families follow somewhat similar patterns for the three square meals a day. Usually they have breakfast, dinner, and supper, or breakfast, lunch, and dinner.

Most nutritional experts agree that the day's food should be divided rather equally among the three meals. Everyone should have three square meals every day. But we must not forget that square meals can still be simple. A division of the day's food into three fairly even-sized meals follows:

Breakfast	*Luncheon or Supper*	*Dinner*
Fruit	Soup, stew, or other type of main dish	Meat, meat alternate
Restored or whole-grained cereal or enriched or whole-wheat toast and butter or margarine fortified with vitamin A	Vegetables, cooked or raw	Two vegetables, cooked or raw (generous servings)
Egg (every day, if possible) either at breakfast or in cooked dishes during the day	Enriched or whole-wheat bread and butter or margarine fortified with vitamin A	Enriched or whole-wheat bread and butter or margarine fortified with vitamin A
Milk for children	Fruit or simple dessert	Simple dessert or fruit
Coffee for adults	Milk	Milk

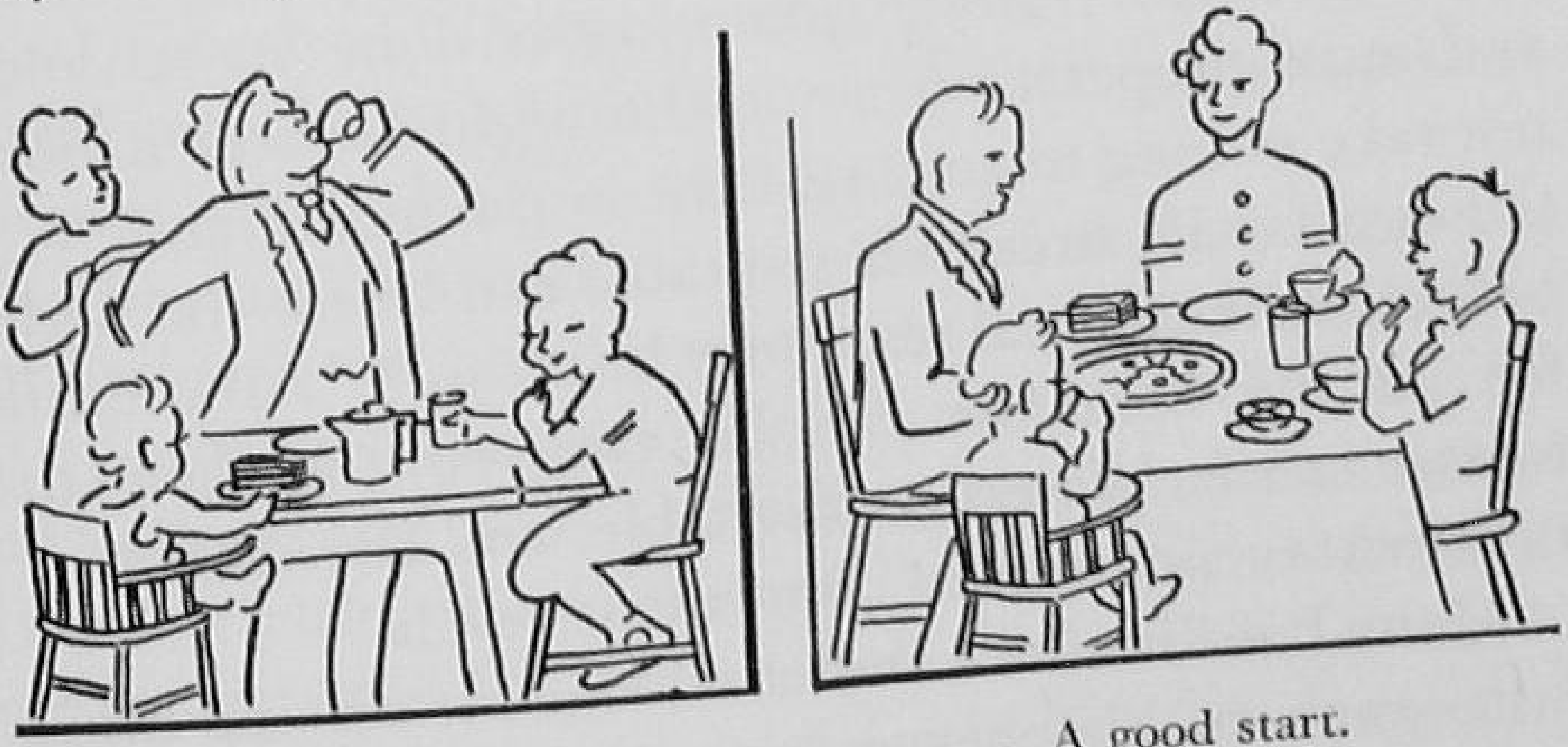
Other foods, such as jellies, relishes, and sweets, may be added as desired. Three meals such as these can be easily planned to meet the total daily food requirements as shown in the food pattern described in Chapter 3.

Eating between meals, except for drinking a glass of milk or eating fruit, should in most cases be discouraged. Young children, malnourished or convalescent children or adults, industrial workers, especially those who work at night, and old people are exceptions to the rule.

MEALS FOR MOST OF US

THE DAY BEGINS WITH BREAKFAST

Breakfast ought to be the best possible start for the day. It ought to be a meal rich in flavor and fragrance,



A poor start. A good start.

The day begins with breakfast.

hot and welcome after a whole night's fast. But so often it isn't. It is usually eaten with an eye on the clock.

Indeed, breakfast is the most neglected meal of the day. Surveys indicate that many workers try to do manual labor all morning long on no breakfast or skimpy ones, such as coffee and a roll. In such cases

lowered efficiency, unnecessary fatigue, insufficient energy, and irritability result. A leading authority in nutrition work with children has said that lack of an adequate breakfast is responsible for much of the malnutrition found in school children.

There may be several reasons for this neglect of breakfast, but probably the ones most often responsible are lack of sufficient time and thought. Leaving things until the last minute causes a mad scramble in the morning. Perhaps the problem would be entirely solved in your family if everyone got up just a half-hour earlier. If some planning is done in advance and some preparation made the night before, it does not take so long to get breakfast in the morning.

For a family breakfast the table can be set the night before, or individual trays may be set out. All utensils for getting breakfast can be grouped together, the toaster can be placed on the table, and the "makings" of breakfast put within convenient reach.

Many families use a buffet scheme for serving breakfasts—each member serves himself from a table, a serving "bar," or shelf in the kitchen. Other families have a convenient breakfast nook or table in the kitchen which saves both time and steps.

Although the breakfast plan (p. 52) is a simple one, it can be varied so that these meals will not be monotonous. For instance, for fruit one can have oranges, grapefruit, tomato juice, apple sauce, or one of the canned fruit juices that are so easily served. Many people serve citrus fruit regularly because it provides

a good share or all of the day's requirement for vitamin C. There are many varieties of whole-grain and restored cereals—cracked wheat and oatmeal and many prepared breakfast foods. All breads, including rolls, muffins, popovers, doughnuts, waffles, and pancakes, should be made from whole-grain or enriched flour. Soybean flour added according to tested recipes further increases the food value. For variety try serving brown sugar or honey, or add chopped dried fruit, such as prunes, raisins, figs, or dates, to cooked cereal. Eggs may be served in a variety of ways: soft-cooked, scrambled, poached. Some people prefer the same meal every morning, which of course cuts down the time necessary both to plan and prepare it.

The cost of an ample breakfast is higher than that of a scanty one, but the returns in increased health and energy more than make up for it. Cost can be kept down by using cooked cereals instead of ready-to-serve cereals, fruits in season, and whole milk instead of cream on cereals. Such practices as eating a candy bar or drinking a coke in the middle of the morning to make up for a scanty breakfast usually prove, in the end, to be expensive in terms of both health and wealth.

LUNCH OR SUPPER

Like breakfast, lunch or supper should include about one-third of the day's food, and all the essential foods should be represented. A meal that is lacking in one essential food is a poor risk, for it throws on

the other meals the responsibility for making up the deficiency, a responsibility which they often fail to assume. A nutritious lunch or supper need not involve a lot of time in preparation, but it does require planning. In this case, as always, a scanty or hurried meal should be avoided.

A good supper or lunch consists of a thick nutritious soup, scalloped or creamed dish, or other type of main dish; one or more vegetables (raw or cooked, served with white sauce or butter or as a salad); whole-grain or enriched bread and butter or margarine with vitamin A added; fruit or simple dessert; and milk.

In planning meals, care should be taken that each meal supplements the other meals of the day. Unless you have milk and vegetables in your lunch or supper, it is hard to get your daily quota.

Since this meal is often eaten away from home, it is more fully discussed in the section of this chapter entitled People Who Eat Out.

DINNER IS SERVED

Whatever our responsibility for the family's meals, we should know the standards for a good dinner. For many people, dinner is the most important meal of the day, the meal when the family can be leisurely. It is also the meal which usually includes the meat or other high-protein dish of the day. As shown in the list on page 52, a good dinner includes a meat, meat alternate, or other protein dish; two vegetables (generous servings); whole-grain or enriched bread and butter or

margarine fortified with vitamin A; fruit or a simple dessert; milk for children and possibly another beverage for adults.

Meat alternates or substitutes include fish, cheese, egg, dried beans and peas, nuts. Meats are made to go further by combining them in dishes with vegetables or cereals.

Many people feel that there is no such thing as a meat substitute. In many homes meatless meals are usually eaten without enthusiasm. One of the reasons is that an adequate substitute is rarely offered. Meat is a high-protein food, and for people of our food habits its flavor gives a certain zest to a meal. If meat is left out of a dinner, be sure to include other high-protein foods. You can make up for the protein in meat by serving peanuts, fish, eggs, cheese, milk, and dried beans and peas. All these can be so prepared as to be delicious as well as nourishing.

You can extend or stretch the flavor of meat in many different ways. A little meat may be made to seem like more by combining it with rice, hominy, macaroni, spaghetti, or other cereals, by using a savory dressing of bread, by putting it into a chowder or hearty soup, or by cooking it with vegetables in a stew. The more soybean products you include among these extenders, the better your chances are of getting adequate proteins.

Serve plenty of vegetables always and in all ways. Raw vegetables are fun to chew and are full of vitamins. Raw carrots, cauliflower, turnips, green pep-

pers, cabbage, and straws cut from the inside stocks of broccoli are good to eat and often less expensive than celery. There's no better "picker-upper" for a jaded appetite than a cool, crunchy salad of raw vegetables.

Don't get into a vegetable rut! Avoid dull monotony by choosing and serving a variety of vegetables in a variety of ways. Sometimes serve them with a creamy, flavorsome sauce, or mix one or more vegetables, or vary the seasoning. Use a variety of greens, such as spinach, turnip greens, chard, kale, beet tops, dandelion greens, and mustard greens.

When you mix vegetables, however, be critical of the flavors and don't serve one mixture, like carrots and peas, too frequently, or it will become unpopular. And it should! Try such combinations as carrots and onions or peas and celery for variety's sake.

Get variety of texture, as well as of color, into your meals. Do not serve soups and creamed soufflés and custards at the same meal. Baked beans and crisp slaw are good together because they have contrast, something soft and something chewy. The same reasoning applies in serving toasted bread or crackers with soups or creamed dishes.

Do not serve too many strong-flavored foods, or bland and mild-flavored foods, at one meal. Many meats and fish have strong flavors and consequently go well with mild-flavored vegetables. Chicken, being mild in flavor, goes well with strong-flavored vegetables, such as onions and cabbage.

There should be no repetition of the same flavor at the same meal. When you serve apple rings with pork chops, do not have also apple salad or apple juice.

Every meal should have contrast in foods—light with heavy, crisp with soft, strong with delicate, colorless or neutral-toned with colored, cold with hot.

"What's the dessert?" is perhaps the most frequently asked question in America. Dessert is no longer thought of as simply an extra sweet dish to be tacked on at the end of lunch, supper, or dinner or as an inducement to make youngsters eat all their vegetables. Today desserts are thought of as possibilities for adding highly nutritious foods to the diet.

Add a dash of inspiration to your meal with the dessert. The element of surprise is almost as important as the flavor of the dish itself. No matter how much your family likes chocolate pudding, for instance, you will vary it occasionally if you want it to remain a favorite. Add chopped nuts to the chocolate mixture on one occasion, next time fold in a beaten egg white to make it foamy, or convert the dish into chocolate floating island. Finely chopped candied orange peel mixed into chocolate pudding gives it extra flavor and provides something to crunch.

"What this country needs is a new fruit for dessert." That is the way we feel as April showers fall and April market stalls become devoid of fruit. Oranges and grapefruit are less abundant and more expensive than they were in March. Melons are nonexistent, and

berries command a budget-breaking price. Even the old standby, the apple, has gone into a decline.

But there are other solutions to this problem beside prunes. On your own or the grocer's shelves may be dried figs, apricots, bananas, or raisins, which can be made into dishes delicious enough to top off any meal. Canned fruits offer still another possibility. In planning amounts of fruit for home canning, allow amply for this period. Those who have access to freezer lockers should plan in advance for this period, too.

Pie is one of America's most popular desserts. There's nothing more delicious than a juicy fruit pie.

Other delectable desserts that are both good and good for you include cheese and crackers, baked apples, baked custard, bread pudding, cookies, cup cakes, floating island, fruit in gelatin, junket custard, gingerbread, tapioca pudding, and the never-to-be-forgotten ice creams and sherbets.

In reality delicious desserts are more than good tricks. They are trump cards of unusual value. Not only can they end a simple meal with satisfying finesse—they can tempt your family to eat foods which are good for them, they can permit you to vary your food in unusual ways and thus make your meals more interesting and palatable, and in addition to all this, they represent an invaluable stock in trade from the angle of entertainment.

Check and recheck your meals with the basic seven. Have you had plenty of milk in the meals? Have you

had both cooked and raw vegetables and fruit? What high-protein foods have you had? What about enriched or whole-grain breads and restored cereals? How many green leafy vegetables have you had? What about citrus fruits? Get the seven basic foods in every day's menus. Sensible meal planning is not difficult. It just takes foresight and frequent checking, at least to start with.

MEALS FOR SOME OF US

PEOPLE WHO EAT OUT

There are many occasions when you must eat a meal away from home. Perhaps you are in school and must either eat your lunch in the school cafeteria or bring it from home. Maybe you are a stenographer in a large business office and have to obtain a hurried lunch at the corner drugstore. Maybe you are a student or clerk away from home and eat all three meals in restaurants or cafeterias. Any or all of these situations may make it necessary for you to eat away from home.

Wherever you eat, be a good food shopper. In general, the same rules that apply to planning meals at home will hold for those selected outside the home.

Breakfast. The same principles apply to selecting a breakfast at a restaurant or a cafeteria as apply to getting it at home.

Remember that your breakfast should constitute one-third of the day's food. It should include fruit, egg (4 to 7 times a week), whole-wheat toast or re-

stored or whole-grain cereal, and milk. You may enjoy coffee, but it's no substitute for milk.

This rule for a good breakfast applies equally to a cafeteria or a restaurant featuring à la carte service. In restaurants having both types of service, usually a club combination is cheaper than ordering à la carte.

When you order a club breakfast, you take it as it is, except perhaps for a few restricted choices. Some restaurants might be influenced to improve their club choices by a few constructive comments from patrons. Even so, you can choose your breakfast with the meals which are to follow it in mind. In many families, the meal pattern tends to be much the same, and most of us know in a general way what we will have for the other meals at home. Of course, if you eat all your meals out, you yourself can decide what you will have the rest of the day.

Lunch or supper. Your lunch (or supper), like your breakfast, should be selected in terms of the meals that preceded it and those that are to follow. If for any reason your breakfast was inadequate or lacking altogether, remember that your lunch should help make up for this inadequacy. You should ask yourself three questions: What did I have for breakfast? Was it adequate? What am I likely to have for dinner? Then choose your lunch accordingly.

When you eat your lunch at a cafeteria, the responsibility for selecting a well-balanced meal falls quite largely on yourself. In a cafeteria, the clear thinker gets the best-planned meal. Learn to think on your

feet. Before loading a tray, decide on a meal. Then if something else looks good to you, fit it in.

Most cafeterias serve a wide range of food, although often suggestions are made for combinations of food at a given price. In other cafeterias, and this applies particularly to school cafeterias, a smaller range of foods is served.

Often school cafeterias provide one complete lunch and one or more foods to be used in conjunction with a box lunch brought from home; still other school cafeterias serve only a few simple foods to be added to a lunch brought from home. Whatever the situation, the principles are much the same.

Of course, one of the first considerations in choosing a lunch is the amount of money you have to spend. You want to get the best lunch you can with the money you have. If you have only a small amount to spend, you must select carefully if you are to have an adequate lunch. As is pointed out in Chapter 7, the most expensive foods are not always the most nourishing. Therefore it pays to find out in advance what the choices are to be for the day and to plan for yourself what will be a good buy to supplement your other meals.

You should select a well-balanced meal. Do you remember our pattern for planning lunch at home? Here it is: soup, stew or other type of main dish, vegetables (cooked or raw), enriched or whole-wheat bread and butter, fruit or simple dessert, milk.

This pattern will serve as a guide for selecting lunch away from home, too. But the more you know about nutrition, the more you can vary the pattern.

Suppose you get your lunch at a snack bar where choices are very limited. Here, again, you may look to the basic seven groups for a guide. You choose a peanut butter sandwich, tomato juice, clam chowder made with milk, and an apple. You check to see what your lunch has contributed to the day's basic seven groups. You have succeeded in getting some food from every group but the first, and possibly the seventh.

At dinner time you will need to be sure to get your quota of Group One along with enough of the other foods you need. In other words, your breakfast, lunch, and dinner must combine so as to provide the seven basic groups.

The quantity of food selected at lunch should be sufficient to provide for the afternoon's activities. If you are a clerk in a store, you will not need as much food as a factory worker who is doing strenuous physical labor. You will need more food, however, than a man in an office who sits at a desk all afternoon.

If you bring part of your lunch from home, the food bought at the cafeteria should be chosen in relation to it. In view of what the lunch from home contains, you should select the foods needed to make a satisfactory lunch. Your choice may be milk, soup, vegetables, fruit, sandwiches, ice cream, or other food. Whatever

it is, your choice is bound by two considerations: your needs in terms of the other meals for the day, and the money you have to spend.

Sometimes in cafeterias so many attractive foods are displayed that you forget to consider balance or needs. Or, as a result of being hurried in the line, you finish your purchasing without enough food and that little, poorly chosen. Occasionally foods are so arranged that the customer must select his dessert and possibly salad before his main course, and as a result you make a poor choice.

Or you may lose track of the cost of the various dishes and find yourself with a meal that costs more than you planned. As the old saying goes, "Your eyes have been too big for your stomach," and, unfortunately, also too big for your pocketbook. All these mistakes are likely to occur when you eat at a cafeteria unless you decide in a general way what you want before you get into the line.

But suppose you have made a mistake and chosen too much of one kind of food and not enough of another. What can you do? Simply this: you will have to make up for your poor selection at subsequent meals.

Dinner. Everything that has been said about selecting breakfast and lunch applies with equal force to choosing your dinner. Remember that our dinner pattern—meat or meat alternate, two vegetables (cooked or raw), enriched or whole-wheat bread and butter or

margarine fortified with vitamin A, simple dessert or fruit, and beverage, preferably milk—will serve as your guide.

Again you must choose in terms of the two preceding meals, breakfast and lunch. Check them over.

Eyes too big for your pocketbook, Billy?

Have you had your quota of foods in the basic seven groups? Dinner represents your last chance to meet the day's food requirements.

You may go to a restaurant where table d'hôte dinners are served. Then you have to select your entire dinner as planned by the restaurant, with perhaps a few choices. Most restaurants nowadays make a real

effort to serve well-balanced meals, and this provision makes it easier to insure getting the basic seven groups.

When eating out, you have quite as much choice of the foods you eat at mealtimes as you do when you plan and eat them at home, although of course you cannot always control the quality. When vegetables are cooked in large quantities and kept hot until served, vitamin content is materially reduced. Hence, in choosing eating places, you should consider such things as cleanliness and the goodness of the cooking. How the vegetables are cooked is especially important. Modern cooking practice calls for the cooking of vegetables in small quantities and for immediate serving.

PEOPLE WHO EAT ALONE

Eating alone often proves to be a difficult business. It requires careful planning. A person's diet is just as important if he eats alone as in a group. When eating alone, many fail to provide themselves with meals including the seven basic groups. They tend to eat the same type of food meal after meal because it is relatively easy to get. There are several ways in which such bad eating habits can be avoided.

It is very important that the lone eater appreciate the fact that meals for one must be planned as carefully and in as much detail as meals for a family. In the beginning, at least, the lone eater will need to write down plans for a week in advance in order to provide meals that are complete and have variety and interest.

Canned foods must be bought in smaller-sized cans,

prepared cereals in assorted individual boxes, and fresh vegetables, fruits, and meats in smaller quantities.

Variety may be achieved by preparing only as much of a given food as can be eaten at one time, and storing the rest in the refrigerator for later use. This applies particularly to vegetables, which can be kept in a refrigerator satisfactorily for short periods of time without loss of vitamin content.

Frozen vegetables and fruits are a real boon to the person who eats alone and who possesses a refrigerator containing a freezing compartment. A small amount can be taken out of the carton and the rest kept in the freezing unit of the refrigerator for later use.

On the other hand, there are some foods that, if adequate storage space is available, can be purchased in quantity: potatoes and other root vegetables, apples, rice, macaroni.

These foods may be cooked in quantity, also, if proper safeguards to conserve their food values are taken, and served a second time in a new guise. Custards may be baked for two or three meals at one time if the eater is fond of them.

Eating alone has one advantage. Many people enjoy reading and eating at the same time. You can do this if you eat alone. You'll find a good book is enhanced by a good dinner, and vice-versa.

Anyone who does light housekeeping should plan on having guests occasionally or eating out, particularly if he finds mealtimes lonely. It takes a little planning to have company, but it is worth the extra effort.

PEOPLE WHO WORK AT NIGHT OR AT IRREGULAR TIMES

If you work on the night shift or at irregular times in a factory, you may be saying to yourself, "Why should I know about the basic seven? It certainly doesn't fit my case!" That's where you're wrong, for it does.

The same general rules for feeding the day worker apply to feeding the man or woman who works at night. No matter what shift you work, you need food from the seven basic groups every day. If you are a night worker, you may need to eat oftener than a day worker to avoid that "all washed up and dragged out feeling" so many night workers complain about.

Night workers have to rearrange their living habits. *When* and *what* to eat so as to get all the basic foods is one of the most important problems facing them. This problem involves adjustments not only for the worker but for the meal planner and the rest of the family. But these problems can be met with careful planning.

Even though the worker works at night or at odd times during the day, there should be at least one meal a day when the whole family eats together. A family life that is as normal as possible is important from the point of view of the worker and his family. Let's not forget this fact in making our plans.

Now let's get down to cases—three different workers in three different families who succeeded in solving the problems of when and what to eat in a satisfactory manner for all concerned.

Jerry Hanson works from 7 A.M. *to 3* P.M. Our first worker is Jerry Hanson. His family consists of his wife Helen and their three children: John, aged fifteen, in high school, Susan, aged twelve, in the eighth grade, and Elizabeth, aged nine, in the fifth grade. Helen manages the home and works fifteen hours a week in the local library. Jerry works at a local factory on the 7 A.M. to 3 P.M. shift.

The family have their breakfast together. This has required a good deal of adjustment on the part of both Helen and the children. Helen admits this but says, "I want the children to have two meals a day with their father. Our days are so busy that now that we've got used to getting up at 5:30 A.M. we find the extra time well worth the extra effort. And we get to be together at breakfast, which is worth a lot to all of us. Fortunately, the children go to a school where they can buy milk in the middle of the morning."

This is a typical breakfast as planned by Helen:

Orange or tomato juice
Whole-grain cereal with milk
Toast (made of enriched white bread) and
 margarine fortified with vitamin A
Milk for the children
Coffee for the adults

The family live within walking distance of the schools the children attend so that the children can come home for lunch. A typical lunch for Helen and the children is as follows:

Scrambled eggs
Whole-wheat bread and butter
Raw carrot sticks
Milk
Cookies and fruit

Jerry carries his lunch and eats at the factory, so Helen has a lunch to pack every day. Helen reports, "Now that I've learned how to plan it, packing a lunch is fairly simple. Of course, the mainstay of Jerry's lunches is sandwiches. I never use anything but whole-grain or enriched bread for them, but I try to vary the bread and the filling, using, say, rye and white bread one day and maybe whole-wheat and white the next. I usually make Jerry two sandwiches with some filling that will 'stick to his ribs,' like meat, chicken, cheese, peanut butter, or egg. Jerry gets hungry and eats his lunch around 10 A.M. This is what he had yesterday:

Peanut butter sandwich (whole-wheat bread)
Sliced hard-boiled egg sandwich (enriched white bread)
2 raw carrots
1 pint of hot cocoa in thermos jug
Apple
Cookies

"When Jerry gets home around 3:30 P.M., I have a snack ready for him. Sometimes it's a bowl of steamy hot soup, sometimes a salad or some fruit. It's usually something light so that his snack won't spoil his appetite for dinner at 6 P.M. Dinner is a family meal again. Yesterday we had:

Meat stew with vegetables (potatoes, peas, onions, and dumplings made with enriched flour)
Raw cabbage salad
Enriched white bread and butter
Gingerbread and milk

We seem to all be thriving on this schedule, and our family life, though busy, goes on much as usual."

Bob Brown works from 3 to 11 P.M. Robert Brown and his wife Doris live in a manufacturing city in the southeastern part of the United States. Bob is a fireman at the local power plant and works the 3 to 11 P.M. shift.

The Browns have a four-year-old daughter, Molly, and Doris expects another child in about three months. Doris Brown took the home economics course in the local high school before her marriage and uses her knowledge of food management to good advantage in planning the meals for Bob, their youngster, and herself.

Doris describes the family schedule. "The main difference that Bob's working hours make in our family schedule is shifting dinner from night to noon. We have breakfast together around 8 o'clock in the morning. Usually we have something like this:

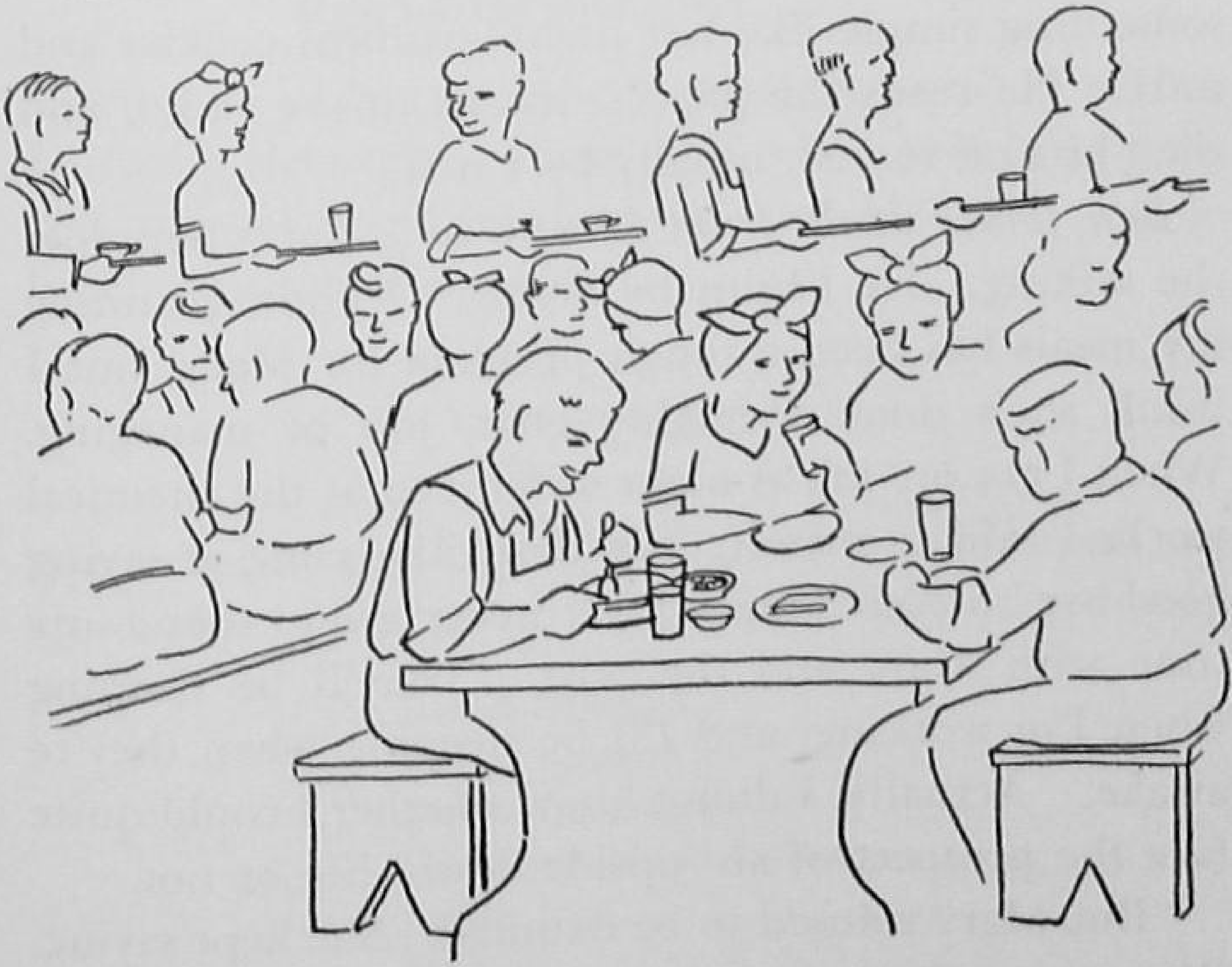
Fruit
Whole-grain cereal with milk
Toast (made of enriched white bread) and butter
Bacon and eggs
Milk for Molly
Coffee for Bob and me

Bob likes to spend the morning working in the garden or 'puttering' around the house. I spend it straightening up the house and getting dinner. Molly divides her time between us.

"At noon we have our dinner together as a family. Yesterday we had:

Meat loaf
Boiled sweet potatoes
Cooked greens
Bread and butter (whole-wheat bread)
Chocolate pudding
Milk

"Bob goes off to work about 2:30 P.M. He eats his supper in the plant cafeteria and yesterday he had:



Supper at the factory.

Scalloped potatoes and ham
Buttered carrots and peas
Whole-wheat bread and butter
Fruit gelatin
Milk

"Molly and I eat our supper at home. Last night we had:

Potato soup
Bread and butter sandwiches (enriched white bread)
Carrot and raisin salad
Milk
Oatmeal cookies

"Bob gets home about midnight and he's usually hungry. So I plan to have a snack ready for him—something simple like last night—oatmeal cookies and milk. He reads the papers, listens to the radio, and then he's off to bed, usually by 1 A.M."

Ben James works from 11 P.M. to 7 A.M. Ben does the talking. He begins by saying, "I know planning my meals has been a tough problem for Mary, but I think she's done a mighty good job of managing. When I got my job as night watchman at the chemical works I said to myself, 'It's about the same as saying good-bye to your family. I'll never get to spend any time with Mary and the boys. They'll be sleeping when I'm working, and I'll be sleeping when they're awake.' Actually, I didn't know whether I could quite face the prospect of an 'upside down' life or not.

"But Mary refused to be daunted. She kept saying, 'We can work it out some way. The boys are at the

age when being with their father is awfully important, and we've simply got to work it out.' And she did.

"This is the way we manage our 'upside down' life. I get home from work about 7:30 A.M., just in time to eat with the family. I have my supper, and they have their breakfast. Do you know what Mary calls it? She's coined a word for it, 'brupper.' Well, no matter what it's called, it tastes mighty good to a hungry man. Take yesterday, for example. We had:

Fruit juice
Whole-wheat cereal
Eggs, bacon, and potatoes
Toast (enriched bread) and butter
Coffee
Milk for the youngsters

Then I go to bed and the youngsters go off to school. I usually sleep until about 3:30 P.M. (just before the children get home from school) and Mary has a light lunch waiting for me, say

Fruit
Toast (whole-wheat)
Coffee

A lunch like that is just enough so it won't spoil my appetite for dinner with the family at 6:30. Last night we had:

Baked haddock
Baked potato
Stewed tomatoes
Corn bread and butter
Apple pie
Milk

"Then I have the evening with the family and leave at 10 P.M. with the lunch that Mary has packed for me to eat at 2 A.M. She's really getting to be an expert at packing a lunch. Last night I had:

Devilled egg sandwich on enriched white bread
Peanut butter and ham sandwich on whole-wheat bread
Apple
Molasses cookies
Milk in thermos jug

A night meal for a night watchman.

She varies my lunches a lot. Sometimes I have chili or soup or coffee or chocolate in the thermos bottle. Sometimes she puts in a vegetable or fruit salad in a cardboard container, sometimes a pudding. She's really good at seeing to it that a man has food he can work on. When I praise Mary for the way she manages, she just laughs and says, 'I'd be a poor wife if I

couldn't do my job as well as you do yours.' At any rate, she's done a fine job of making one night worker's life worth living and his meals worth eating."

Getting a meal at the crack of dawn.

Other tips on preparing meals for the night worker. The idea Mary James had of serving a combination meal is a good one. Fruits either stewed, canned, or fresh, griddle cakes, French toast, eggs and bacon, hamburger patties, and creamed fish are suitable for such overlapping meals. Actually the same foods can be served for the family's breakfast and the worker's supper if he returns from the night shift in the early morn-

ing. Or the worker's breakfast, if it must come at night, may easily be the family's supper.

When work shifts and school hours make family meals impossible, the next best scheme is to plan foods which can be prepared at one time but cooked separately for the worker and his family.

If your father comes home in the middle of the night or gets home just as dawn is beginning to crack and insists that no one is to bother to get up to get him a meal, try setting aside one refrigerator shelf or part of a shelf for food to which he may help himself. But remember that he doesn't want something that is hard to cook. Many a man will fry hamburgers if you have the meat cakes flat and waiting in the refrigerator. Bacon and eggs may tempt a lagging appetite. Assemble the makings and utensils for coffee. Have some stewed fruit, a piece of pie or cake, or a simple dessert ready and waiting.

PEOPLE WHO CARRY A LUNCH

Whether you are packing a lunch for a child, a worker, or yourself, remember that the packed lunch must be equal to one eaten at home or in a cafeteria or restaurant. It is a *meal*—not just a snack to stave off a person's hunger until he can get home for a meal.

However, before discussing the actual food to be included in the lunch, let's consider some preliminary preparations for it. People carry their lunches in different ways. Some use the commercial varieties of containers which are divided into compartments and

equipped with a thermos bottle; some carry a box, a pail, or a heavy paper bag.

If you carry your lunch regularly, a lunchbox with a thermos bottle is the best selection, particularly if the food is to be packed for a long time. Choose a container and thermos bottle which can be easily cleaned.

Paper spoons and cups, paper napkins, waxed paper, and containers or cartons with tight covers come in handy in packing the lunch. If each item is wrapped separately in waxed paper, it will be fresh and attractive when opened.

Some of the preliminary steps in packing the lunch can be taken the night before, such as putting cold food into cups with lids and placing them in the refrigerator. The actual packing of the lunch should be done just before the child goes off to school, or the worker to his job.

Plan to have an extra "little lunch" packed separately in the night worker's lunchbox or in that of the child who goes to school early and comes home late. Youngsters who are growing rapidly and are very active often need additional food. For the night worker, the "little lunch" will break up the long night stretch and prevent the sag which is more likely during the night than during the day.

Keep the "little lunch" balanced but small. It is really a pick-up and should not spoil the appetite for the main lunch. Try combinations like these: an apple plus a small grated cheese sandwich; a peach plus

a small peanut butter sandwich; three dried prunes stuffed with cream cheese, fruit, and a cookie.

In the packed lunch be careful of meat dishes and puddings or fillings made with milk and eggs. Be doubly careful if the lunchbox cannot be kept in a fairly cool place until lunch time. Don't use meat held over several days or egg combinations made up long ahead of time. Keep these mixtures very cold until you are ready to put them in the box. Food poisoning is too serious to risk.

If lunchboxes cannot be kept in a cool place, sandwich fillings should be dry rather than moist, and fruit and vegetables should be whole and in their natural covering.

Now let's consider the contents of the lunch itself. The lunch should include a hearty food, a raw vegetable or fruit, a beverage, and a simple dessert. It must contribute its share of the daily food quota, approximately one-third.

Sandwiches are, of course, the mainstay of the lunchbox menu. The number will depend on the age and capacity of the person. For a hearty sandwich any of the following fillings are good: egg, meat, fish, peanut butter, baked beans, chopped nuts, or cheese. These may be combined with raw chopped vegetables such as cabbage, celery, carrots, or green peppers. Instead, the raw vegetables may be moistened with salad dressing and used as a filling. Whole-grain or enriched bread that is a day old is best for sandwiches because it is easier to cut thin and spread with butter or margarine.

A plain hard-cooked or devilled egg to eat with a lettuce sandwich is a welcome change from egg salad filling. Tuna fish or salmon with a little salad dressing on rye bread makes a good sandwich. Try combin-

All good children pack good lunches and eat them, too.

ing peanut butter with bacon, jelly, or dates for sandwich fillings.

What should be put in the thermos bottle? Well, if the day is blustery and cold, soup will be very welcome. Otherwise, milk or some milk-containing beverage is a good choice, especially for the school-age child. Milk should always be part of the child's lunch, either as a

beverage or in cooked foods. The industrial worker will appreciate a mixture of half milk and half coffee, cocoa, or plain milk. On warm days cool, refreshing fruit juices or tomato juice will prove very acceptable.

Celery and other raw vegetables are good and may be wrapped in waxed paper to keep them fresh. Whole tomatoes are also good with salt and are easier to handle than in a sandwich.

A good dessert, and one that is easy to pack, consists of fruit and one or two cookies. If cake is part of the menu, a cake without frosting is the best choice. Cup cakes are especially good. A small container with a tightly fitted top will make it possible to carry a custard, a cooked fruit, or a simple pudding in the lunchbox.

Avoid monotony in planning lunchbox meals. Variety and palatability are vitally important. Nothing dulls the appetite more than eating the same old things. Never let the packed meal be monotonous or hard to eat. Include nourishing food and plenty of it. But there's no reason why a box lunch cannot tempt the eye and the appetite, too.

PEOPLE WHO ARE OLDER

Is there a grandmother or grandfather living with your family or near you? Have you thought about the food problems of old people? You may find such information useful sometime. Many young people of high school age have.

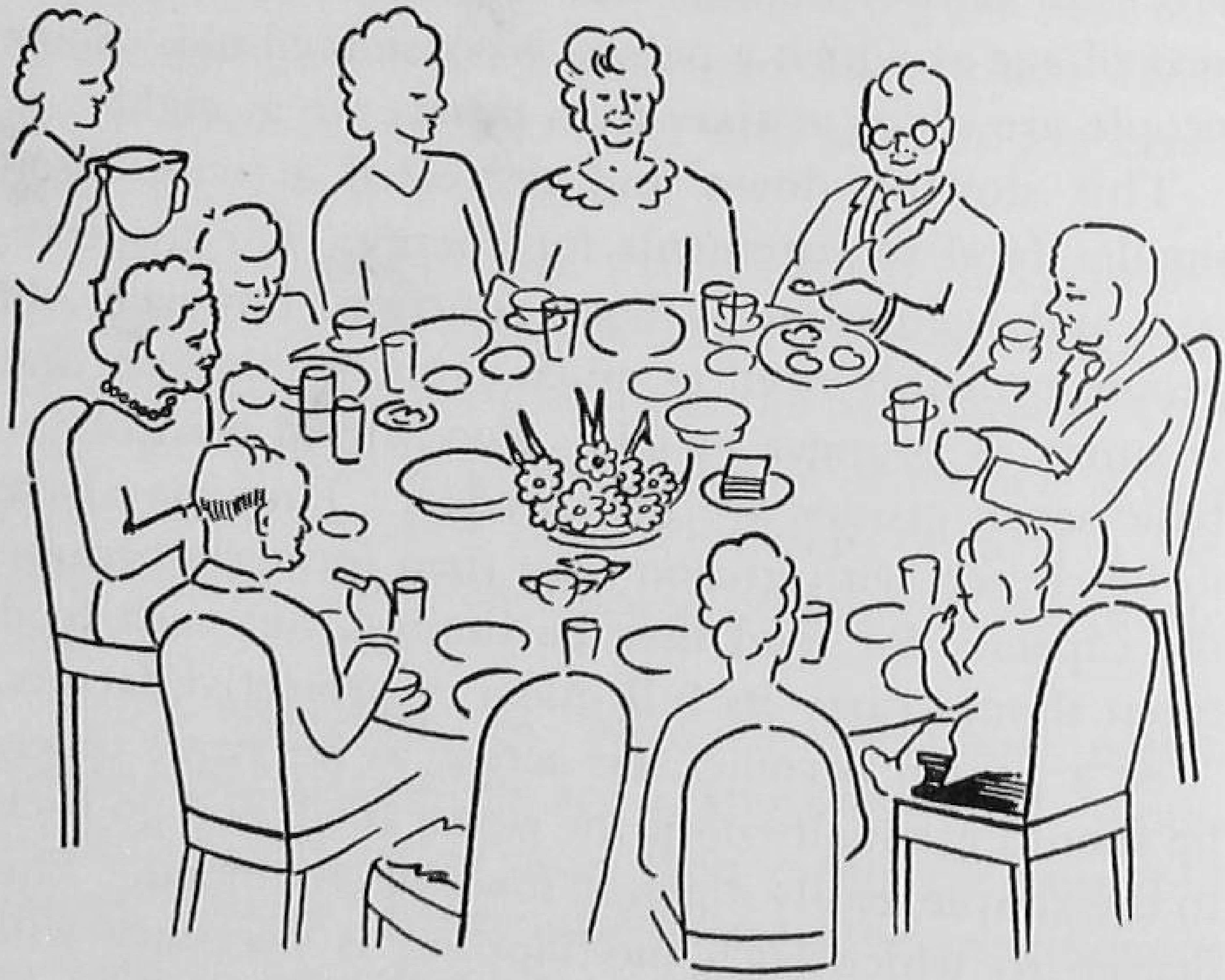
People who are old need simple, well-balanced meals, modified to meet their individual requirements and tastes as well as those due to advancing years. As people grow older there is a slowing down of all the body processes as they become less active. There is no one year of age at which a person is considered old. Some people are older at sixty than others are at eighty.

This slowing down and decreased activity mean smaller food requirements for energy. For tissue repair and regulation of body function, however, old people probably need as much protein, minerals, and vitamins as younger people. Foods from each of the basic seven groups are still needed. They may have to be chosen with greater care than formerly because the capacity for food may be limited, but each food eaten should carry its full quota of protective factors.

As a person becomes less active, as he grows older, he should gradually omit the richer foods and go back to the simple, easily digested foods of childhood. The degree to which such modification is necessary will vary with the individual. The need may arise at seventy or eighty or ninety. As these changes are made, the basic seven should still be the guide, but the more easily digested foods from each group should be selected.

One of the most common difficulties of old age is the loss of teeth and the inability to adjust to artificial ones. Other than this handicap in chewing food, the digestive system may be quite normal, and the desire for a variety of foods should be met if possible. This can

be accomplished if all solid foods are finely chopped so that they demand little if any chewing. Vegetables do not need to be puréed. Even though food must be finely divided, it should be served as attractively as



Fun for older folks.

possible so as to tempt the appetite, which frequently lags in older people.

Let's see how Mrs. Fred Banks, Jr., as hostess, planned the menu for the golden anniversary of Mr. and Mrs. Fred Banks, Sr. She knew that her mother-in-law could not chew solid food and hesitated about accepting invitations to dine outside the home. Some of the older guests might have similar handicaps. She

knew that her guests would feel more comfortable if no attention was called to their infirmities, so she planned food that everyone could eat:

Fruit juice cocktail
Turkey croquettes with mushroom sauce
Baked stuffed potatoes Green peas
Tomato aspic salad
Ice cream in flower molds
Anniversary cake

Everyone enjoyed the meal and congratulated the hostess on it.

As people approach the more advanced years of eighty or ninety, the hearty and rich foods may need to be eliminated entirely, although a craving for simple sweets is quite likely to develop and may be indulged with moderation. Comfort and happiness are more important at this stage than unnecessary restrictions. The philosopher who said, "Old age is but a second childhood," may have been thinking about food, but the average older person does not think of his own requirements from this standpoint.

The really feeble old person may need to have a diet of milk, eggs, chopped meat, soft fruits, chopped or strained vegetables. If he tires easily and eats little at a meal, he should eat oftener, perhaps five times a day. Between meals fruit juice and a sandwich or cracker are often welcome.

The foods, then, to be included in the diet of the older person are milk, eggs, fruits, vegetables, cereals,

and meats. For the best of health in the later years, it is necessary to reduce the amount of food as activities are reduced and to take food in its simple, more easily digested forms, but to be sure that the diet provides an ample supply of the protective factors.

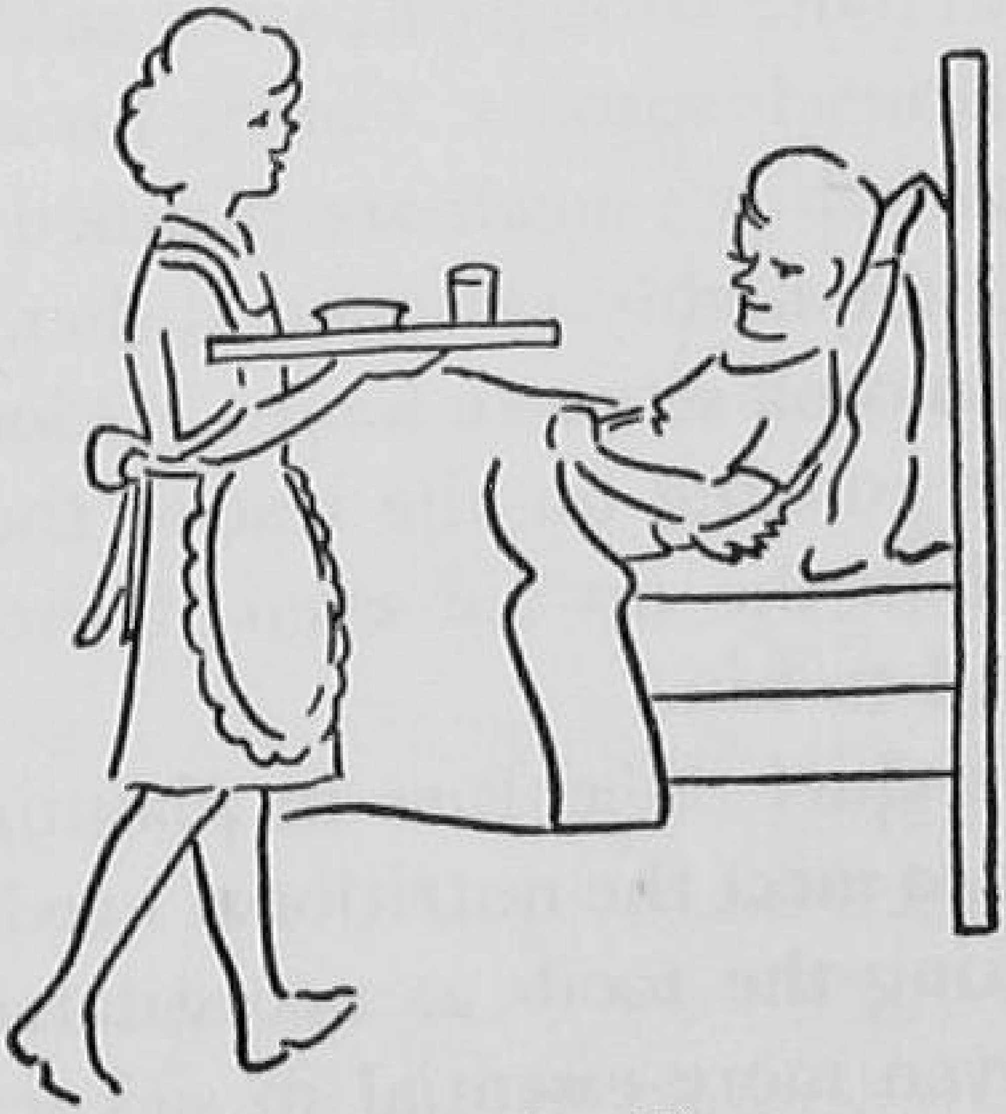
PEOPLE WHO ARE ILL

Let us suppose that a member of your family is ill and unable to eat the food served to those who are well. When this occurs the family menu may be planned so that some items are suitable for both the sick person and the rest of the family, and only one or two special foods will need to be prepared for the invalid.

In cases of illness or injury where a doctor has been called, he should be asked what his patient should eat, and his directions should be followed exactly. Sometimes the doctor orders a liquid diet. Milk, the most serviceable of all liquid foods, may be used in many ways in such a diet. First of all, it may be used as a beverage. Often a little vanilla or fruit juice may be added to vary the flavor, or it may be made into soups or junket. Buttermilk, fruit beverages, soups, beef juice, broths, and tea are all included on the list of foods suitable for a liquid diet. People on liquid diets are usually fed oftener, every two or three hours.

If a soft diet is ordered, the sick person may have all the foods listed under the liquid diet, plus such things as milk toast, well-cooked cereals, soft-boiled or

poached eggs, custards, mashed or sieved vegetables, fruit pulps, apple sauce, ice cream. From such foods, with careful planning, it is possible to provide a diet which meets the requirements for maintenance and growth.



Food for the ailing.

But suppose that the anxious days of illness are safely past. Our patient is on the road to recovery. Or perhaps a member of the family has a slight cold or some other less severe illness. What then?

In the case of the convalescent, we should, of course, consult the doctor. Under such circumstances he may order a light diet. This type of diet is also appropriate for the slightly ill person.

The liquids and soft foods indicated above are all possibilities for a light diet. Simple salads, crisp toast, well-cooked meat, fish, fruit, and vegetables are needed

and are enjoyed by convalescents if they are well selected, well prepared, and attractively served.

For a person who is not entirely well, choose vegetables that are mild in flavor. Squash, carrots, peas, celery, tomatoes, and string beans are better to serve, as a rule, than more strongly flavored cabbage, turnips, broccoli, or Brussels sprouts. Caring for a convalescent is easier if the family's meals are planned around well-flavored but not highly seasoned dishes, so that you do not have to cook separate foods. Odors of strongly flavored foods cooking for the rest of the family may be distasteful to the invalid even if the food is not actually served to him.

One of the chief difficulties in planning meals for sick people is to meet the nutritional needs of the body while restricting the foods as necessitated by the illness. It is even more essential in sickness or in convalescence than in health for meals to provide all essentials. If foods from each of the basic seven groups cannot be eaten by the invalid, it is wise to check with the doctor regarding the use of mineral or vitamin preparations to make good the deficiency.

No matter how, where, or when you eat, you need three square meals every day—meals that square up with the seven basic food groups.

Some Questions to Ask Yourself

Are you getting three square meals a day? Which of these two daily meal plans most nearly fits your practice?

Breakfast

Doughnuts Coffee	Orange juice Whole-grain cereal Milk Toast

Lunch

Sandwich Pop Ice cream	Cream soup Raw vegetable Peanut butter sandwich Ice cream

Dinner

Meat Potatoes Green vegetable White bread Apple pie Coffee	Meat or fish Potatoes Green vegetable Enriched or whole-wheat bread and butter Salad Custard Milk

Which of your three daily meals is your poorest?

What can you do to each to make them all square?

What new food practices do you need to acquire?

Why is it so important for everyone to eat a good breakfast?

Plan adequate meals for one day using foods that you have grown or canned.

What jobs are there in your community which require night workers? Do you know any home in which one member of the family works on a night shift? Find out what his or her hours of work are. Suggest a suitable meal plan for the family.

Plan a day's meals for the Winslow family, consisting of Dad, aged 47, Mom, aged 43, Grandma, aged 80, Pat, aged 16,

ily and friends. It matters little whether the table is set with silver and china or tin and graniteware; the simplest meal is made more attractive, more palatable, and more enjoyable by good companionship. Whenever possible, make eating a social event, a cheerful, happy time for your friends, your family, and yourself. Your food will digest better if you do.

One of the best ways of making mealtime pleasant is through conversation. At mealtime, members of the family are usually in good spirits, eager and ready for food. Over their plates, family members can share the happenings of the day, cultivate common interests, and develop a feeling of "oneness"—an essential ingredient for happy family living.

Encourage Dad to talk about his hobbies, Mother the Parent-Teachers Association, Brother his ice skates, and Sister her school parties. Save your best for the family mealtime. Don't rush through the meal. Linger and get acquainted with your own folks.

MAKING THE TABLE AND THE FOOD ATTRACTIVE

An attractive table isn't necessarily an expensive one. The important thing is to have the tablecloth clean and fresh, the silverware shining, the glassware clear and sparkling, and everything arranged attractively. A centerpiece of flowers or green leaves, however simple, adds pleasantness. All these details have a marked effect upon your family's appetite. Much depends upon your taste and ingenuity.

In making mealtime a good time, it's important to remember that the appeal of food and the enjoyment of meals operate through the eye as well as the taste. There are many touches that liven up a meal and rescue it from the colorless, uninteresting class. Probably the first of these to remember is to serve fresh vegetables and fruits in abundance, especially when in season, cooked enough to be tender yet not so much as to lose either their color or their shape. A dash of paprika on the baked potatoes, slices of tomatoes with the hash increase appeal. A radish rose is only a radish, and a carrot curl a piece of carrot, but they add interest to a platter of cold meat. A bunch of parsley, which can even be grown in a pot, gives an air to any meal that makes it almost invaluable. In addition, it is good to eat and rich in food value.

The family can be reconciled to meat loaf if you serve it with baked potatoes, broiled onion slices, and parsley. Grilled tomato slices are bright accessories with fish or on vegetable plates. Cinnamon apple rings are colorful, and their flavor is just right with pork. Braised apple rings are often used with ham. Such tricks with food add variety and enjoyment at little expense to a meal.

Making food and its serving attractive requires special care in the case of the sick or convalescent. Many homes have some sort of tray that may be used in serving the convalescent. It will be more attractive if it is covered with a white or gaily colored cloth or paper

doily. Gay dishes, sparkling glassware, a bright napkin, a flower in a bud vase, all give the tray a bit of life or color.

We should arrange the dishes with the convenience of the patient in mind. The use of dishes or glasses that tip easily or of heavy dishes should be avoided. See that everything that is needed is on the tray. The soup may get cold while you rush back for a forgotten spoon or the salt. When poached or creamed dishes are served on toast, cut the toast into squares just large enough for one bite. All these precautions will make eating more pleasant and enjoyable.

SHARING MEALTIME RESPONSIBILITIES

Meals are more pleasant when the responsibility for them is shared by all members of the family instead of one member being left to bear the brunt of all the preparation for the meal and the cleaning up after it.

Families can and should share mealtime responsibilities. The Varick family has a particularly fine scheme for doing this. Mother prepares the meal with some help from Rose and Carl in fixing vegetables; Rose, aged ten, and Leo, aged sixteen, cooperate in setting the table. Father serves the food, and six-year-old Carl takes off the dishes for the main course while Rose brings in the dessert.

Let's take a peep into the home of the Varicks and see how this plan works out in practice. It is a hot summer evening.

Mother Varick is in the kitchen putting the final touches to the meal; Rose and Leo are setting the table; Father and Carl are in the living room, Father reading the paper, Carl playing with his train on the floor.

Rose has just spread a clean white cloth on the table and placed a small green plant in the center. Leo enters the room with a tray of silver and a stack of plates, saying, "Well, it's about time you got the cloth in place. A minute later and I wouldn't have had any place to set the dishes."

Rose laughs and answers, "Don't I always get it down before you get back from the kitchen? You'll have to admit I'm a pretty speedy gal!"

Leo begins setting the individual places. First he places a plate and a knife at the right of the plate with the cutting edge toward it; at the right of each knife he puts two spoons, one for ice cream and one for coffee. Then he places the fork at the left of each plate with the tines up.

Leo lays the napkins, each in its own ring, at the left of the forks. Mother enters with a tray, places a salad at the left of each place. Then the sugar bowl, cream pitcher, and salt and pepper are placed on the table, the first two near Mother's place. The serving spoons for the potatoes, the two vegetables, and the casserole dish are at Father's place.

Rose goes to the kitchen for the milk, bread, and butter. Mother brings in the fish casserole, potatoes, and other vegetables, and Leo calls the rest of the family to dinner. Father and Carl troop into the dining

room, the family standing behind their chairs until Mother is seated.

Mr. Varick quickly serves the dinner. He puts fish soufflé and potatoes on each plate and hands it to Leo, who serves the vegetables and then passes it on. The first plate is passed to Mother and the others are served in turn. Carl starts the bread and butter, and Mother reminds Rose, "Please help yourself to the relish, Rose, and pass it on."

Conversation at the Varick table is like the conversation in millions of American homes—the day's events, politics, baseball scores, news of the townspeople. After the main course is finished, at a signal from Mother, Carl gets up and removes the dishes and used silver, beginning with the casserole. Then he "crumbs" the table. In the meantime, Rose has gone to the kitchen to serve the ice cream.

Whenever glasses need refilling, Leo gets up and fills them from the water pitcher. Mrs. Varick pours coffee for Leo, his father, and herself from the dripolator that Leo brings in, and Carl goes to the kitchen for two glasses of milk.

As soon as the meal is over, Father, Carl, and Leo adjourn to the living room, and Rose and Mother clear the table. Then Rose tells her mother, "Call me, Mom, as soon as the dishes are ready to be wiped," and joins her father and her brothers in the living room.

It is one of those hot August evenings, the kind that makes the kitchen work an especially depressing chore. The rattle of dishes in the kitchen announces that

Mother will soon be even more uncomfortable as she plunges her hands into hot dishwater.

Father heaves a sigh as he settles back in his chair with his evening paper. It is good to be home after a day in the office. Carl sits on a low stool looking at the "funnies." Leo and Rose stretch out on the floor for a game of Chinese checkers.

"Golly, it must be tough to work in a bakery the way Mr. Mann does," remarks Leo. "Bob says his father thinks it's cool when he gets outdoors on a day like this."

"Of course, just as it feels cool to come in here out of the kitchen after a meal's been cooking," comments Rose.

"Say," Father comes out from behind his paper with a jerk, "wasn't the kitchen pretty hot when I stuck my nose in there tonight?"

"It certainly was," responds Leo.

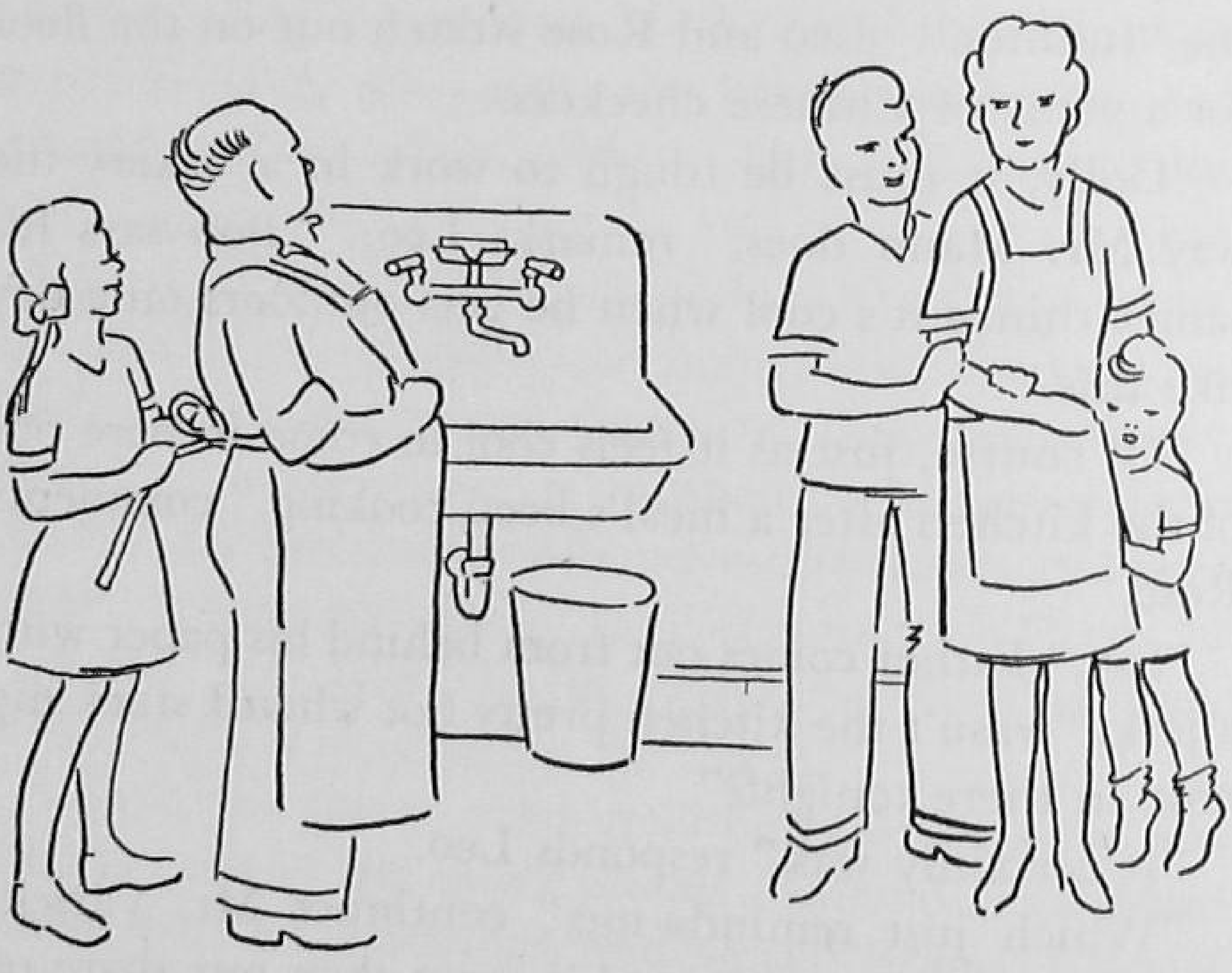
"Which just reminds me," continues Mr. Varick, "that we've been taking a bit more than our share of vacation lately and leaving one member of the family with more than her share of K.P. duty."

"Gee, we've almost forgotten about Mother's Night Off, haven't we?" agrees Leo. "Let's chase her out of the kitchen."

Carl and Rose lead the rush to the kitchen with shouts of "M.N. O.!" and find their mother, decidedly damp of brow, about to put her hands into the hot dishwater. With much ceremony Leo ushers her from

the kitchen and sees to it that she is comfortably seated in a chair on the porch with the evening paper.

"Whew," exclaims Father as he wipes his brow and ties on his "butcher's" apron, "we've got to have at



Mother's night out of the kitchen.

least two or three M.N.O. days a week, and maybe more, in this kind of weather." Yes, the Varick family have a good scheme for sharing mealtime tasks. At least Mrs. Varick thinks so as she sits reading the evening paper on the cool porch.

Mrs. Walsh, a saleswoman who lives across the town from the Varicks, is another person who has learned how to plan efficiently so that she can do her job, keep

house, rear her family, and provide adequate meals which all enjoy. In response to a query from a friend she describes her system:

Barrstown, North Carolina
June 16, 1945

Dear Letty:

So you want to know how I can carry on my job as a clerk at Thompson's store and still do a good job of managing my home and keeping us all well and happy?

Well, if there is any secret involved, I guess it is the team work we have developed as a family. When I began working, Jack and I decided that we would share and share alike on the responsibilities for the home—and we've included our youngsters in this sharing.

At our house, whoever gets home first starts the preparations for dinner. As the rest of us arrive, we all join in, and we really have fun getting the meal ready and on the table. We'd change the old saying, "Too many cooks spoil the broth," to "The more cooks the merrier—and the sooner dinner's ready."

Dinner is really the high point of the day for our family. We haven't seen each other since morning, and we have so much to talk about. Jack regales us with accounts of what went on in his office. Brother tells about his latest exploits on the junior high school basketball team. Sister chatters about the "goings-on" in the fifth grade, and I brag about how skillful I'm getting when it comes to helping customers find just the right kind of gloves for a particular outfit. Sometimes several of us try to talk at once, and there is a good deal of good-natured kidding, but we all take it in our stride. I think all of us look forward to dinner with pleasure and anticipation.

After dinner is cleaning-up time. When it comes to clearing the table, we couldn't get along without our two light-

weight trays for whisking things to the kitchen. I'm always delighted at the steps saved and the speed with which we can put the dining room to rights or set the table. I say "we" because I mean "we." Everyone in the family pitches in and helps and we have fun in the process.

We've learned many short-cuts and timesavers. The fact that the whole family has to get off to an early start makes an efficient morning schedule necessary. While Jack and the children clean up the kitchen at night, I set the breakfast table, get out the toaster, measure the coffee in the dripolator, and post the meal plans for our next dinner. After breakfast in the morning, the dishes, except for the glasses and the silver, drain until dinner time.

And speaking of dishes, we've learned to save dishwashing by serving foods right from utensils in the kitchen onto the plates which the kitchen brigade rushes into the dining room. Or we choose main dishes or desserts that can be cooked in their serving dishes.

You are going to take on another job, you say. The best advice I can give you is this, "Be sure and take your family in on the planning." If you do, your days will be busy but rich in shared experiences. You will be able to get good meals that help keep up the health of all, and your mealtimes will be high spots in the day. Best wishes in your new venture.

Sincerely,
MADGE

SHARING MEALTIME PLEASURES

From the beginning of time, inviting others to share food has been regarded as the finest act of friendliness. And it still is.

If money or food is limited, sharing mealtime pleasure with friends will require more ingenuity and

greater simplicity, but we can and should still do it. Sociability, good cheer, and good fellowship are always needed by your family, your friends, and yourself, so don't neglect hospitality.

If you are on a busy schedule but still want to share mealtime pleasures with your friends, try combining forces. This is the method the Schmidts and the Petersons worked out.

Late one afternoon Clara Peterson and Marie Schmidt were coming home together on the street car after a meeting of their community improvement club. Clara said, "Oh, dear, as soon as I get home I must start dinner, and I don't have the remotest idea what I'm going to have, except for the dessert. What are you feeding your family tonight, Marie?"

"I have the makings of a lamb stew, but I haven't a thing for dessert."

Clara laughed, "Dessert and salad are all I have," she said. "I made up a batch of custards this morning and an apple-sauce cake. I've got the makings of a green salad in my refrigerator, too."

"Why don't we combine forces?" Marie suggested. "I have no dessert or salad; you have no main dish. Why don't you bring Ed and the children and the custard, cake, and salad over to dinner tonight? Let's see, we'll be four and four—eight in all. I'm sure I'll have enough stew by adding more vegetables."

That's how it all started. Marie Schmidt's two little boys were delighted at the prospect of company for

dinner. That night they needed no urging to set the table.

When Paul Schmidt arrived home he came into the kitchen. "Hey, what's going on, Marie? The table's set for eight."

Marie explained what had happened. "It's a good idea," Paul agreed. "Is there anything I can do to help?"

"You might usher the boys up to the bathroom to wash for dinner."

Paul grinned, "I won't need to. Judging from the sounds, I'd say they're up there already."

Marie said, "Well, you can straighten up the living room. Pick up the papers and put away the magazines."

After dinner the two families agreed that it had been fun and that they were going to do it oftener and include other families. The plan made entertaining much simpler. "We might call 'em 'Come and Bring It Dinners,' " Paul suggested.

Yes, sharing family mealtimes takes flexibility and planning, but it's always possible and sometimes necessary.

Many families enjoy picnics and find them relatively simple ways of entertaining family friends. A cool, shady spot beside a lake, the glory of a sunset in the sky, blue smoke rising from the fire and floating lazily out over the water, the fragrance of cooking food and burning wood, good companions with whom to share

a meal—these are the reasons why picnics are popular with so many American families.

There are many kinds of picnics. There is the picnic which is simply a good dinner, planned so that it may be served outdoors. If we have the time and a way to make the trip, we may go to the woods, the lake, or the seashore; but, if necessary, such a picnic may be served under the trees in our own backyard, on the porch, or in a park.

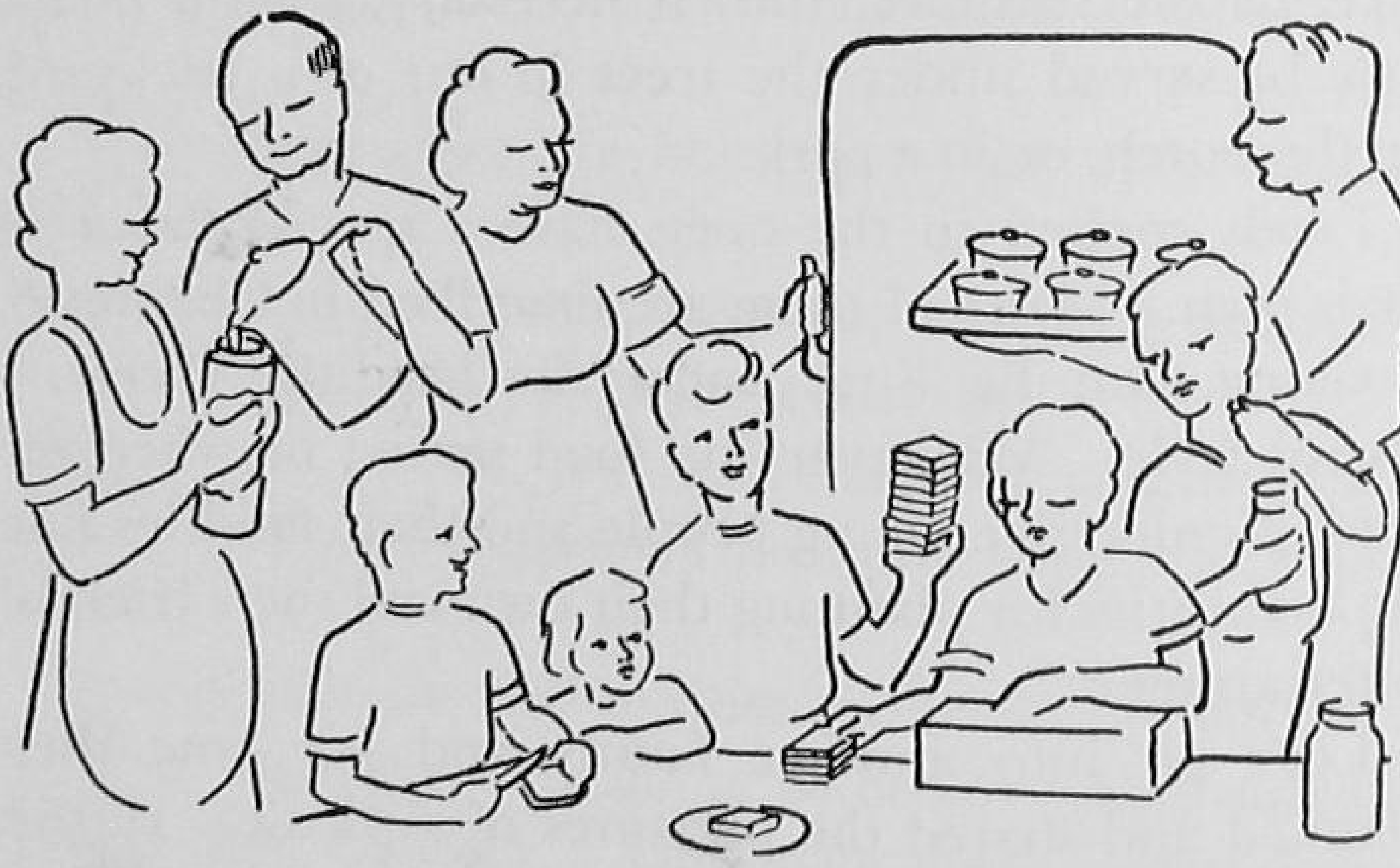
Foods cooked in the open have a special flavor of their own. Many of them are described in Chapter 8, Cooking Can Be Fun, under the heading, Picnics—Gypsy Style. Whatever the food served or wherever held, picnics give young people and their families fine opportunities for planning their own and their friends' entertainment.

Let's go into another family and see how they planned and shared the pleasures of a picnic. In the Horack family picnics are always informal, spontaneous affairs. They usually originate somewhat as did the one they had last week.

"I've got a nomination to make," stated Ven Horack, as he pushed his chair back from the dinner table. "I nominate tomorrow night as a picnic night. We've been cooped up in this apartment house wigwam of ours for a long time now. We need to stretch our legs and get a whiff of real spring air. Let's ask the Kregstons to go with us too."

The motion was quickly and unanimously passed by the children, Joey, aged twelve, and Doris, aged four-

teen. Joey and Doris began an animated conversation about which was the best place to go. Fanny, the mother of the family, listened, smiling to herself over their enthusiasm and thinking that the fact that the Horack family walked or went on a street car to their picnics didn't dampen their joy in going at all.



Picnic plans and planners.

Five-thirty the next afternoon found the Horacks and Kregstons gathered in the Horack kitchen, buttering bread, washing fruit, making their favorite kinds of sandwiches, filling the thermos jug with a cold drink, and "snitching" olives or pickles when no one else appeared to be looking.

They never did reach the spot Joey and Doris had finally agreed upon. Leah Kregston and Fanny spied a little park from the street car, and so they ventured into new territory.

Joey Horack was soon betting Ted Kregston that he could start the fire in the fireplace without a chunk of newspaper and with only one match, and Doris was claiming that she could find the first violet of the season in the wooded section of the park.

Somehow the toasted sandwiches, salad, cold vegetable juice, cookies, fruit, and hot chocolate all tasted wonderful when eaten outdoors. "A great deal better than when you have them at home," commented Jake Kregston.

Everyone from four-year-old Sarah Kregston to Ven and Fanny Horack had lots of new adventures that day. But then a picnic was always a series of new experiences for every member of the Horack and Kregston tribes.

These stories of families in action show us many ways in which we can make mealtimes good times. If meals are to be pleasant and enjoyed we must:

Be courteous.
Serve well-cooked food attractively.
Share mealtime responsibilities and pleasures.
Be sure that the food provided carries its quota of the basic seven groups.

The affectionate easy conversation and laughter of a family and their friends sitting together around the dinner table make mealtimes events to be looked forward to and long remembered. There is little wonder that when we are far away from such homes we say,

"What wouldn't I give to be able to eat with the family tonight!"

Some Questions to Ask Yourself

What responsibility do you take for family meals? Are there other responsibilities you could assume?

In a certain family, the daughters, aged 11 and 8, used to bring their disagreements to the dinner table, which made mealtime very unpleasant. Finally their older sister thought of a way to stop this habit. She took an old candy box and made a hole in the top. On it she printed two words: "Complaint Box." If the children had a disagreement, they were to write a note and slip it into the box. After dinner the family would sit down and talk the situation over. Usually an agreement was reached, meals were much happier, and difficulties were much easier to settle.

Do you think this was a good practice? Why? Have you tried any ways for making mealtimes pleasanter in your home? Describe them.

You have invited a friend to dinner. Match the following choices open to you with the appropriate justification:

Choice	*Justification*
1. You ask your friend to help prepare the meal.	1. You want to learn more about preparing meals. Everyone in your family is busy, so what is done is up to you.
2. You ask your mother to prepare the meal.	2. Your friend likes to cook and would enjoy helping you. Everyone in your family is busy, so guests must share the work as well as the pleasure of meals.

Choice	*Justification*
3. You plan so that you can prepare something before going to school in the morning and the rest just before your friend arrives for the meal.	3. You are very busy and have no time to spend preparing the meal. Your mother is a good sport, has the time, and enjoys the process of meal preparing. There are certain other responsibilities that you can assume to make up for the extra work you cause her.

If You Want to Know More About Making Mealtime a Good Time

Read Aldrich and Aldrich, *Feeding Our Old-Fashioned Children*, Brown and Brown, *Look Before You Cook*, and Rose, *Feeding the Family*. Complete biographical information on these books may be found under Some Good References, pp. 311–316.

6. AS THE CHILD EATS

For People Who Are Responsible for Feeding Children

Good food and enough of it are "musts" for every child in America, for the food the child eats determines how strong and well he will be both as a youngster and as a grown-up.

Many high school boys and girls have an immediate and pressing need for information on children's food. They are taking care of younger brothers and sisters or looking after children belonging to neighbors or friends. But even boys and girls who are not doing these things may find an unexpected use for such knowledge. They can influence the attitudes of others through their own attitudes and actions, thus making the lives of the children around them easier and happier. And then, too, nearly all young persons will find such information useful in the future when they have families of their own.

All children are different. Every child is different from every other child. Sometimes we forget this fact, but it is important that we remember it. It helps us to take care of children right. It even helps us to feed them right, whether they are squirming little babies or boisterous, noisy twelve-year-olds.

Children, even when they are very young, show

strong individual preferences for food, both in amounts and kinds. Anyone caring for them must consider these variations and preferences if he is to do a good job.

But let's begin with babies, or rather let's begin with Jimmy, a chubby little fellow of eleven months.

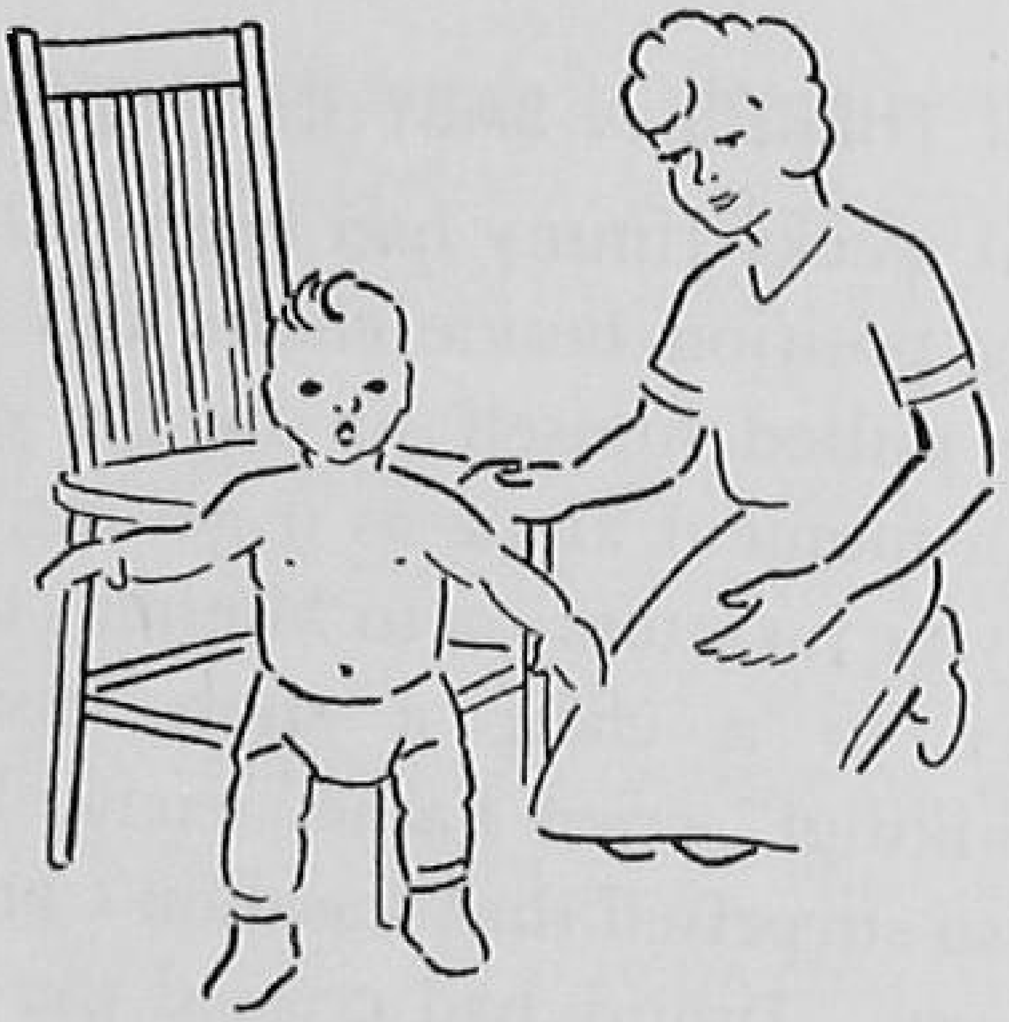
WHEN THERE'S A BABY IN THE HOUSE

For several weeks Jimmy had been pulling himself to a standing position beside chairs and tables. But yesterday he pulled himself up by the dining room chair, stood a moment alone as if getting his balance, and then, paying no attention to Mother's hand, walked straight over to a chair a short distance away. "Jimmy's walking!" cried Father excitedly. Jimmy's mother was so surprised that she didn't know whether to laugh or cry. Jimmy had crossed the last frontier of helpless babyhood.

Less than a year before, Jimmy had been a typical newborn baby. He could turn his head from side to side and move his hands and legs in a random fashion. He could not straighten his legs when lying on his face or raise his head. Jimmy's father, after gingerly holding his first-born in his arms, was convinced that this wailing, wriggling, kicking offspring had more of the characteristics of an eel than a human being. Seriously he had asked the doctor, "Do you think he is really all right, Doc?" Important things had happened to Jimmy in those intervening months.

Important things, indeed! He had learned to raise

his head, to look at an object fixedly, to follow with his eyes anything that attracted his attention. He had learned to aim right in reaching for the rattle tied to the hood of his baby carriage and to reach for the string of spools his father dangled before him. He



Food makes babies grow.

had found out how to roll over when placed on his "tummy," to raise his head, to prop himself on his elbows, to sit with support, to sit without support. At last the day arrived when he could move himself across the floor by creeping and then pull himself to a standing position. Now, holding his body erect, he moved from one place to another unaided. He had learned to walk! Truly this was an important day for both Jimmy and his parents.

Babies grow. Parents have always been conscious of the truth of this statement. Only recently, however,

have most of us become conscious of the importance of food in relation to this growth.

BEFORE JIMMY WAS BORN

But this was not true of Jimmy's mother. As soon as she discovered that she was going to have Jimmy, she did something about his food. In other words, she did something about his food even before he was born!

Dr. Carrol told her immediately that, now that she was pregnant, a well-rounded nutritious diet was more important than ever, for both her own well-being and Jimmy's development depended on it. She had always selected her food with the basic seven groups in mind, so the main difference in her diet was the addition of more milk. She now had a quart of milk every day, a pint for herself and an extra pint for Jimmy.

JIMMY WAS A BREAST-FED BABY

The doctor said, too, that if she followed this diet carefully she would be able to nurse Jimmy. Jimmy's mother was anxious to do this because she knew that breast milk was the best food for a baby. Dr. Carrol had told her that breast milk was best suited for the digestive capacities and growth of babies. "With proper attention to diet, rest, exercise, and outdoor life, and with a willingness to do so," he added, "the majority of mothers are able to nurse their babies. Of course, if for some unforeseen reason breast feeding is impossible, we doctors know of ways of varying cow's milk so that babies can manage it. But your baby's

chances will be better if you nurse him. And from your own point of view, breast feeding is not just a duty to your baby, but also a fine experience in human relationships that you shouldn't miss, at least not from want of trying. And remember, too, that to your baby, nursing means more than food; it also means happiness and security in his mother's love.

"Even when a baby is fed on a bottle rather than breast fed, his mother should hold him in her arms while she is feeding him," Dr. Carrol explained. "It helps the baby to know that his mother loves him, and it builds his security and happiness in her love. Babies need this assurance. They should not be placed in their beds or cribs to take their bottles alone."

WEIGHTY MATTERS

At birth Jimmy was a very husky baby with strong lungs, which he used to advantage, and a weight of seven and one-half pounds. The normal baby like Jimmy weighs around seven or seven and a half pounds at birth. Generally, too, he loses some weight during the first week, but after that he begins to gain. Usually he regains his birth weight before the end of the second week, gaining on an average of from six to eight ounces weekly for the first five or six months. After that the rate of gain slows down. The average baby doubles his birth weight by the end of the fifth or sixth month and trebles it by the end of the first year. That is, he will if he's fed right. Jimmy did.

MEALTIME SCHEDULES

Dr. Carrol told Jimmy's mother some interesting facts about mealtime schedules. "Babies," he pointed out, "are no longer tyrannized over by timetables and rules prescribed for the average baby, as the well-raised baby was a generation ago.

"Babies nowadays are allowed and encouraged to show their own individual differences about how much they want to eat and when they prefer eating. We no longer make a baby with a three-hour rhythm adapt to a four-hour schedule.

"This doesn't mean we've abandoned schedules. Far from it. We know that all babies thrive best on a schedule. But we also know that each baby has his own rhythm of hunger, and this rhythm, rather than a textbook schedule, is the one we urge mothers to follow.

"Babies are individuals, so we treat them as such. This doesn't mean chaos in modern baby feeding, either. Modern mothers are just as careful about feeding schedules as their mothers were. The difference is that today's mother works out a schedule that seems to suit her own baby rather than insisting that her baby adjust to a rigid schedule presented for all babies.

"I guess you might say there's been a revolution in baby feeding. Babies really brought it about. But doctors approve it. And mothers—the wise ones—are going along."

Jimmy's mother quickly discovered that when babies get hungry they cry for food, and Jimmy did so at fairly regular intervals. He wanted, indeed he demanded, food every four hours—six feedings a day, 6 A.M., 10 A.M., 2 P.M., 6 P.M., 10 P.M., and 2 A.M. When Jimmy was two months old, the 2 A.M. feeding was dropped, simply because Jimmy no longer wakened for it. At five months the 10 o'clock feeding was discontinued for the same reason, and thereafter Jimmy seemed satisfied with four feedings in a twenty-four-hour period.

After each nursing, Jimmy's mother would place him in an upright position over her shoulder and gently pat him on the back. Jimmy's man-sized "burps" always amused his father, but his mother knew that they kept Jimmy from being uncomfortable and vomiting his food.

Jimmy's mother found that Jimmy varied in the amount of milk he would take from day to day. This worried her, so she talked it over with Dr. Carrol. Dr. Carrol began by asking her a question, "Do you want precisely the same amount to eat at every meal?"

"Why, no. Of course not," came the response.

"Well, why should you expect Jimmy to then? It will make it easier for both you and Jimmy if you expect slight variations in the amount of milk he takes. The amount he wants will depend on his body needs at the moment. Let *him* tell you how much he needs. Don't try to tell him how much he needs, because you don't know and he does."

Jimmy was a sleepy head. Often he would fall asleep while he was nursing. Then in about a quarter of an hour he would wake up and seem starved. At first Jimmy's mother hesitated about feeding him, but Dr. Carrol assured her that it was all right to do so.

NOT BY MILK ALONE

Jimmy's mother soon learned, too, that a baby's diet is in a constant state of change with new and surprising additions every few weeks. After the first month, Dr. Carrol told her to give him a half teaspoonful of cod-liver oil in a small spoon—Jimmy's "sunshine," he called it. Also during the first month Dr. Carrol wanted Jimmy's mother to begin giving him orange juice, one teaspoonful twice daily at first, and working up to six teaspoonfuls by the end of the sixth month. At first it was given about 8 o'clock in the morning in a nursing bottle and was slightly diluted with water.

Beginning at three months, egg yolk from hard-cooked egg was added to Jimmy's diet at the 2 P.M. meal. Starting with a quarter teaspoonful, Jimmy's mother increased the amount gradually until Jimmy was getting the entire yolk.

At the fourth month, Jimmy was given cooked cereal. At first the amount was small, a teaspoonful or two in connection with the 10 A.M. and 6 P.M. feeding. Gradually it was increased until two tablespoonfuls were given three times a day. At the fifth month a tablespoonful of puréed or strained vegetable was added once a day at the 2 P.M. feeding. By the ninth

month Jimmy was taking about three tablespoonfuls of vegetable pulp daily and enjoying a wide variety, too.

Jimmy's father had not realized babies were vegetable eaters until the advent of Jimmy. "There's cer-

Not by milk alone.

tainly a lot of things I didn't know about babies," he confessed.

With the appearance of his first tooth during his sixth month, Jimmy was given toast, zwieback, or rusk to crunch. When Jimmy was seven months old Dr. Carrol said that he might have cooked strained fruit once a day, preferably at the 6 P.M. feeding.

By the end of the eighth month Jimmy was taking all his milk out of a cup and enjoying the process. This is how Jimmy's mother achieved the transition

from breast milk to cow's milk, or rather to the mixture of whole pasteurized milk and corn syrup suggested by Dr. Carrol. For a week she gave Jimmy one feeding of the cow's milk mixture and three breast feedings. Then for five days she gave two feedings of breast milk and two of cow's milk. For the next four days she gave Jimmy three feedings of cow's milk and one of breast milk. After that Jimmy had four feedings of cow's milk. He was weaned, and he had not objected to the process. Of course, Jimmy's mother used pasteurized milk.

About this time, too, meat (finely chopped beef, lamb, turkey or chicken, and liver) was added to Jimmy's diet. From one teaspoonful the amount given at the 2 P.M. feeding was gradually increased to two tablespoonfuls by the time Jimmy was one year old. Then he was eating all the foods basic to a good nutritious diet throughout childhood and adulthood.

GETTING ACQUAINTED WITH NEW FOODS

All this brings us to one more matter, that of getting a new food into Jimmy. Jimmy, like everyone else, had to learn to eat different kinds of food in order to be well nourished.

This is what Jimmy's mother did when she introduced cereal to his diet. First of all, she saw to it that the cereal was as appetizing as possible. Dr. Carrol had warned her that babies dislike and distrust change.

So she made the cereal taste as much like his everyday food as she could. She cooked the cereal in a

double boiler in milk instead of water, using twice as much liquid as the breakfast food recipes called for, so that the mixture would be as near the consistency of milk as possible. She knew that, if the cereal was thick and lumpy, Jimmy wouldn't like it. But if it was body-warm and thin enough to pour from a spoon, he might even swallow some of it on the first day.

Then she held Jimmy as she did in nursing him. Using a small spoon, she put a little cereal into his mouth. Jimmy spit and sputtered, and some of it wound up on his chin. But that didn't matter. Jimmy's mother just wiped off his chin and began again. She knew that it was not important that he eat the cereal the first day, or even the second or third day, for that matter, but it was important that he find eating a happy experience. So she was nonchalant and matter-of-fact, even though she didn't feel that way. Dr. Carrol had told her that, if she could maintain this attitude when introducing a new food, Jimmy would decide that eating was one of his favorite pastimes. She could avoid later food troubles by getting Jimmy off to a happy start. And so she did, for by the end of his first year Jimmy had learned to take and enjoy all the foods which would form his diet during childhood.

Jimmy's mother also found that the technique of introducing more solid food to Jimmy was simplified by giving him his juice, from the time he was two or three months old, in a spoon instead of a bottle. Later

as he took more juice a cup was used, which in turn prepared the way for milk in a cup and made for easier weaning.

To follow the development of their baby, both physical and mental, from the helpless infant right after birth to the active intelligent little being he becomes by the first year, is the unending delight of all parents and of many older brothers and sisters. Jimmy's parents were wise enough to build the foundation for his sturdy little body and active, curious mind on food—food providing all the necessary proteins, carbohydrates, fats, vitamins, and minerals for growth and activity.

Anyone who has the responsibility of caring for a baby can learn much from the experience of Jimmy's parents.

FOOD FOR TODDLERS TO TEEN-AGERS

CHILDREN GROW AND GROW AND GROW

In the pattern of growth of children there are variations that are as predictable as growth itself. The youngster does not grow an equal amount every year, but rather by fits and starts. Remember how rapidly Jimmy grew during his first year. He trebled his weight by his first birthday. Sometimes babies do even better, depending on their body build and inheritance. By the end of his second year, the average baby weighs almost four times the amount he weighed at birth.

The child doesn't grow so fast between his third and sixth years; he gains on an average of about five pounds a year, which means that a six-year-old's weight is usually somewhere around forty-five and fifty pounds. At the age of eleven years the average child weighs approximately ten times his birth weight, at maturity approximately twenty times. But even here, there are large individual variations among normal children.

Thus, growth in children is very rapid during the first two years, slows down between the ages of three and ten years, and then proceeds at a rapid rate just before adolescent changes take place, between the ages of ten and fourteen. From then until maturity, growth is at its slowest, and it usually stops altogether between the eighteenth and twenty-first year.

All this growth depends on food, the right kind and the right amount. Children need all the food elements adults need, and some of them in greater quantities.

They need a generous supply of proteins to take care of their rapid growth. Consequently, milk, eggs, meat, and fish rich in protein are valuable in the child's diet for growth and other needs of the body.

Equally necessary are the so-called energy foods or carbohydrates and fats—whole-grain cereals, potatoes, and other vegetables and fruits supplying the essential carbohydrates, butter or margarine with vitamin A added and cream in milk supplying the fat.

Minerals are needed for good bones, teeth, blood, and body health. All too often we find children's diets

very low in calcium or lime and iron. Milk is a rich source for calcium, and children need it more than adults. Three or four cups a day will supply the amount needed. A whole-grain cereal, a green, leafy vegetable, fruit, an egg, and one serving of meat daily will provide the needed iron.

Vitamins are needed to stimulate growth and health and to protect the body against disease. Children's diets must be carefully planned to provide a good supply of all the essential vitamins.

Now let's translate all this information into terms of foods.

The following foods in the amounts indicated should be included in the daily schedule of the child after the first year:

Milk: 3 or 4 cups each day. A part may be used in cooked foods.

Vegetables: 2 others besides potatoes, 1 cooked green leafy or yellow; 1 raw.

Eggs: 1 egg every day, preferably; 4 or 5 times a week, surely. May be poached, creamed, baked, soft boiled, or scrambled. (If egg cannot be used every day, some other food, such as beans, cheese, or peanut butter, or another serving of meat should be used.)

Whole-grain or restored cereal or whole-grain or enriched bread: 3 servings a day.

Fruit: 1 citrus or tomato and 1 other, either cooked or raw.

Meat: 1 serving of lean meat, liver, or fish, or peanut butter, cheese, dried beans, or dried peas.

Fish-liver oil: About 2 teaspoonfuls or its equivalent for the young child; during the winter for the school-age child.

If the child gets these foods every day, we can be sure that his needs are being met.

At eighteen months, sometimes sooner, the child graduates from strained vegetables to mashed vegetables and to cooked fruit pulp as well as juice. Minced lettuce or raw carrots can be added after the second year. By the age of three or four, children can have vegetables prepared in the way the family has them.

Of course, the size of servings varies with age. The two-year-old, on an average, gets about three level tablespoons of a main dish and cooked vegetables; the three-year-old is increased to one-fourth cup; the four-year-old gets one-third to one-half cup. Fruits, custards, junkets and puddings, and soup are increased from one-third cup for the two-year-old to two-thirds for the four- and five-year-old. These are rough measures. Remember that the child's appetite is really the best guide.

For the child from five to twelve years of age, servings should be increased in amount, depending on the size of the child and his appetite. You can quickly learn to gauge the size of servings in terms of the child's appetite if you are observant. Children should be allowed "seconds" if they ask for them.

THE DAY'S MEALS

At the end of the first year the child's food schedule shifts to conform more nearly to that of the adult. The periods of 7:30 A.M., 12:30 P.M., and 6:00 P.M.

make for a good schedule, with the heaviest meal at noon. The difference in the diets of younger and older children is in the amount, rather than in the kind, of food. A proper proportion of the day's supply of food (about one-third) should be taken at each meal.

In addition, young children should have a mid-morning and midafternoon lunch consisting of a small cup of fruit juice, tomato juice, or milk and a graham cracker or small whole-wheat sandwich.

A typical pattern for the child's meals follows:

Breakfast

Fruit or orange or tomato juice
Cereal (restored)
Egg
Whole-wheat or enriched toast
Milk to drink

Dinner

Main dish of meat, fish, poultry, or eggs
Cooked vegetable
Potato
Raw green vegetable
Whole-wheat bread and butter
Milk to drink

Supper

Vegetable creamed, scalloped, or baked
Sandwich of whole-wheat bread and butter
Cooked fruit or other simple dessert
Milk to drink

You will see that they are very similar to the three square meals a day described in Chapter 4, and families

with children can provide practically the same meals for the entire family.

Although the requirements of the various members of the family may seem to differ considerably, actually the differences are mostly a matter of quantity, rather than kind, of food. With certain minor adjustments, Dad, Mother, John, aged sixteen, Peter, aged ten, and Susan, aged three, can keep well and happy on the same meals.

Show us the child who doesn't like dessert. You'd have a mighty hard time finding one. Be glad the youngsters in your family do, for a dessert is one more way of slipping in the daily quota of milk, fruit, and eggs with their health-giving vitamins and minerals.

Desserts for children must stand the test of food value rather than just sweetness. Fruit is an ideal dessert for youngsters. Ice cream can be served occasionally, as well as custards and rice, cornstarch, and tapioca puddings.

Pasteurized milk should be used. If only raw milk is available for drinking, it should be boiled for safety.

BETWEEN-MEAL "PICK-ME-UPS"

The healthy, normal child of school age astounds us with his capacity for food. Although he eats three meals a day, he is starved when he comes dashing home from school in the afternoon. He may need a "pick-me-up" after school.

Many children, especially if they are not overweight,

should have something to eat at that time. But we should be careful that they eat what is good for them.

Three or three-thirty is a desirable time for a snack, so that it will not interfere with the child's appetite

An afterschool "pick-me-up."

for supper. Foods that are rich or too sweet should not be given.

There are plenty of wholesome foods that will contribute something of value in the way of vitamins and minerals as well as energy for the afterschool ball game or bicycle ride. Milk, simple milk drinks, or fruit juices are excellent. A few graham crackers, whole-

cereal cookies, or a whole-wheat sandwich may be served with them. Lettuce, chopped raw vegetables, peanut butter, or a dried fruit spread are popular as fillings.

COOKING FOR THE YOUNGER GENERATION

It's all very well to say that Johnny should have eggs and milk and green vegetables, but it's a good deal harder to prepare and present them in such a way that Johnny will like them and eat them from choice.

It may turn out to be a lucky day for the family when baby graduates from his bottle and strained cereal and becomes a full-fledged three-square-meals-a-day member of the family, provided the family decides to serve both children and adults the same basic diet. In preparing food for children excellent cookery is required. Like adults, young children enjoy a wide variety of foods, and the rest of the family can have satisfactory and interesting meals when they are built around their needs. Cooking for children requires, too, an avoidance of the frying pan and of concoctions that result in enlarged girths and indigestion for grown-ups.

Because early childhood is the time of greatest growth, the most important thing about cookery for children is to try to retain every vitamin and mineral in fresh foods. (For detailed instructions see Chapter 8, Cooking Can Be Fun.) It is also important to keep the fine natural flavors of food and to guard against overcooking.

Since most children like to eat things because they taste good, rather than because of their nutritive value, soft-pedal the "eat-this-because-it's-good-for-you" line, and spend your energy making the food more palatable and appetizing. To do this successfully there are a number of things that you will need to know.

Foods should be cooked simply; broiled meats, baked meats, poached, boiled, or coddled eggs, and stews are all highly enjoyed. Organ meats, such as heart and liver, are extremely important for the iron and vitamins they add to children's diets.

Most children prefer mild-flavored vegetables, such as squash, carrots, peas, celery, tomatoes, spinach, string beans. Children learn to like strong-flavored vegetables only after many trials.

Cream sauce may be used to give variety to vegetables cooked for children, but as a rule it is better to let the flavor of food be enjoyed for its own sake. Children usually like raw vegetables. Crisp carrot sticks and crunchy stalks of celery are much enjoyed. Citrus fruits served whole or as juice are favorites with them, too.

Seasoning for children's food should be slight, for they are very sensitive to flavors. They enjoy the flavor of food as it is. We should use less salt than seems necessary to the adult, and pepper should be omitted entirely. Butter is a good seasoning for children's food because it adds nutritive values as well as flavor.

Appearance is important, too. Anemic-looking vegetables are a trial to everyone, but particularly to chil-

dren. They love the gay colors of well-cooked carrots, beets, tomatoes, and spinach.

Children are sensitive to textures of food. They dislike food that is sticky or gummy or lumpy. They like textures that are smooth and soft.

KEEPING THE PEACE ON THE FOOD FRONT

With so many ways to make food attractive to youngsters, there is little excuse for battles at mealtime. Let's not have them!

Suppose a youngster doesn't like eggs the way you've been fixing them. Maybe you fix them soft and jiggly. Try hard-cooked ones for a change. Put them in custards or cream soups. Try eggnogs, flavored with vanilla. An egg in any guise is still an egg.

If the child takes a dislike to any given food, for example, a vegetable, try it in a new way. You might put it in soufflés, purée it, cream it and put a little grated cheese on top. If he still dislikes it, remember there are other foods which are of equal value. Don't force it! Mixed flavors, as in creamed vegetable soups or stews or creamed vegetables and meats, may be the answer. Use your ingenuity!

Suppose the youngster goes on a milk strike? Well, don't give up the ship—or the milk! Quantities of milk can be used in casserole dishes, in soups, in custards, in puddings, in ice cream. A child doesn't have to drink milk to get it.

Do you eat absolutely everything? Most of us don't, so why should we try to hold children to such impos-

sible ideals? Let's allow youngsters a few pet dislikes too. If Barbara shows a real dislike for cauliflower, let her dislike it, but be sure she gets what cauliflower provides in some other form.

Sometimes youngsters are allergic to certain foods; others actually disagree with them. Sometimes they honestly dislike certain foods even after trying them many times. Don't force the hated food. You may ruin a perfectly good appetite.

MEALTIME—A HAPPY TIME

Gay dishes, a sunshiny room, happy comradeship with the family, food good to look at and to eat make for a happy time at mealtime. A calm, easy, matter-of-fact attitude upon the part of grown-ups is probably one of the best guarantees of an enjoyable mealtime for children.

Give the child a chance to eat with other children once in a while. Let him go visiting occasionally. Children, like adults, enjoy breaks in a routine.

Forget to scold or punish or "correct" the child during mealtime. You will only spoil his appetite if you do. Don't be like Charlotte's family.

The other day at lunch a little girl by the name of Charlotte looked up from a bowl of soup, eyes shining, mouth full of soupy bread, and said, "Guess what I want for my birthday? Some goldfish! We've a bowl of goldfish at school, and sometimes the teacher lets me change the water. Can I have some goldfish? Can I, Mother? Can I. Daddy?"

This is how it was:

"Charlotte, don't talk with your mouth full. How many times must I tell you to say, 'May I'?" Mother said crossly.

"Yes, and for gosh sakes swallow that bread," exclaimed brother.

"You can't have any goldfish until you learn to sit up to the table as you ought to," added Father. Charlotte began to cry and wasn't able to finish her meal.

This is how it might have been:

"Well, if you're sure goldfish are what you want, dear, I think perhaps we could manage some."

"Oh, Mother, could you? Could I really have them for my birthday?"

"I shouldn't wonder, Charlotte. Don't you think we could understand you better if you'd take smaller mouthfuls?"

"Uh-huh! I guess so," and with that Charlotte returned to eating her meal happily, carefully making her bites of food smaller and dreaming about her goldfish.

Children will eat if they are hungry. If a child refuses to eat there is some reason for it. He may be excited or overtired. Maybe you unconsciously encourage him not to eat. Do you worry because he does not eat the right kind or quantity of food? Children sense your attitudes very quickly. If you feel that carrots are absolutely necessary, carrots will probably be the food the child refuses to eat.

It is very annoying to a child to have someone sitting over him watching his every move to see that he eats everything. Suggestions such as, "Ann, eat all your dinner so you can find the kitten on your plate," "Eat your spinach," "Please drink your milk for Jane," will show the child that you are concerned and will distract him from eating. The first time you remind the child it will appear to do some good, but soon it will become a habit with you and will be ineffective.

A matter-of-fact statement such as, "It's dinner time," will remind the child that it is time to eat. Sometimes just moving the plate a little will help. Such suggestions do not make the child feel that he is the center of attention, but do make him realize that he is at the table to eat rather than to play.

Suppose that a child "mutinies" at mealtime. Suppose that the youngster refuses to eat a food or even a whole meal. Do not be upset. Don't let him know that you are at all concerned. Missing a meal occasionally will not hurt a healthy child. After refusing to eat a meal, however, the youngster should not be given anything to eat until the next. If a child persistently refuses to eat, however, his parents should take him to a doctor.

If the child dallies too much, calmly remove the meal after a reasonable time, say after a half-hour. Be casual, matter-of-fact, and friendly. Do not beg, plead, or urge. Don't let him even suspect he can get you down by not eating.

A new food will be eaten more readily if served along with one the child likes. Serve a small amount at first, assuring the child that there is more if he wishes it. A child likes repetition, so repeat the food on the menu before he forgets the flavor.

A child will eat better if food is prepared so that it is easy to eat. Soups that are thick enough to stay in his spoon or thin enough for him to drink seem to be most satisfactory.

Foods such as meats, vegetables, and fruits should be cut to bite size. A leaf of lettuce that may be taken up in the fingers is much easier to eat than lettuce that is cut in shreds. Too many side dishes are confusing. Put the main course on one plate.

Young children should be encouraged to feed themselves. Sometimes, though, they get tired before the meal is over. Then help should be given.

Children of all ages like to cook or help with cooking. Often this is a good way to get them interested in foods. Eating food that one has helped to prepare is fun. Eating food that one has helped to grow is even more fun! (See Chapter 8, Cooking Can Be Fun, especially the section, When Children Cook, pp. 199–204, and Chapter 5, Making Mealtime a Good Time.)

Children delight in food that is different. Gingerbread men, animal cookies, sandwiches in various geometric shapes are highly enjoyed. Telling a child that you have a surprise for him leads him to anticipate such food with keen delight.

Children are natural conservatives about eating. They like the things they are used to. Polly is not likely to tease for coffee and pie unless some grown-up recommends them to her. The serpent in her Garden of Eden of wholesome food is usually some visitor who, in the hope of gaining Polly's favor, offers her a taste of this or that forbidden food.

It is surprising to what extent other people's food likes and dislikes influence children. If someone in the family says, "This dessert isn't good," or "I don't like cabbage," or "Do we *have* to have carrots every night for supper?" we needn't be surprised to find children developing prejudices against these foods.

Foods that are refused or criticized by other members of the family are often refused by children. They feel that if cabbage isn't good to Daddy or Mother, it certainly isn't good to them. Such comments do not help children learn to enjoy a broad range of foods.

HELPING CHILDREN WITH TABLE MANNERS

Children are great imitators. Their table manners will be good if they are exposed to good manners by their family. We can best suggest the use of good table manners by careful observance of good manners ourselves.

If we say, "Please," "Thank you," and "Excuse me," we will soon hear children saying them. In this way older brothers and sisters, fathers and mothers can do much to encourage good manners in children. We should be careful, too, not to expect too much of chil-

dren. The little child has so much to learn about food and eating that we cannot hold him to unreasonably strict table etiquette.

Some people expect a youngster to do nothing but eat all through a meal, even though most children don't. It is natural—and right—for a child, particularly when he is small, to look around, talk, and play while eating. The little child's attention span is short, his interests wide and new, and eating is still a new, strange, and complex activity. Inevitably there will be some mess, some accidents, some wilful disregard of social graces. If the family becomes upset over this type of behavior, it may be better for Johnny to eat by himself, to have his meal over before the family eats.

But most children eat better, behave better, and enjoy their meals more at the family table. Whether Johnny is to eat with his family depends not only upon Johnny but upon his family as well. If the family is capable of showing some tolerance of childish lapses, then it is better for Johnny to eat with his family.

Children of every age should be encouraged to take part in table conversation. Their contributions should be treated with respect by grown-ups. This helps them develop poise and learn how to express themselves without self-consciousness. It is important for them to have such experiences before the teen age.

A good rule at mealtime is to treat children as casually and as courteously as one would familiar guests. Make the conversation merry and general.

Meals ought to be a time of truce between parents and children, brothers and sisters, mothers and fathers when painful subjects are banished. Polly's refusal to eat lettuce, Fred's mark in arithmetic, Father's bruised knee should all be forgotten. Polly and Fred will be the first to respond with happy smiles and sturdy appetites to the general atmosphere of happiness and good will.

BY WAY OF SUMMARY

Here, then, are some things to remember:

Children like:

Food that is well cooked.
Food that is smooth, soft, mild, crispy, or crunchy.
Something they can eat in their fingers.
Food that is served attractively, that is pretty.
Color and more color.
Mild flavors.
The feeling that eating is fun. (And it can be!)
Having their likes and dislikes considered, but not too much.
Pleasant conversation at mealtime.
Any surprise.
Food that is fun (animal molds, sandwiches in shapes).
Routine most of the time, breaks in routine some of the time.
Almost everything that they should (if you give them a chance).
Eating with their families.

Children dislike:

Lumpy or watery food. (It's terrible, try it!)
Textures that are sticky, gummy, or lumpy.
Strong-flavored foods.

Whites of eggs that are "gooey."
Highly spiced foods.
More on a plate than they can eat.
Food that is hard to manage.
Eating when they are tired, excited, angry, or sick.
Being forced to eat.
Being left out of conversations. (They belong to the family, too. Make them feel like it.)
Eating alone.
Having adults scold, nag, or fuss at them.

If America is to be strong, children must have the food they need for normal growth and health. That's why it is important to know what children should eat and how to help them do it.

Some Questions to Ask Yourself

A nursery school teacher reports, "It was a boarding school in the mountains that gave me the idea of the 'three bites' system. To that school—where I taught for a brief summer term—came children unacquainted with green vegetables or salads, whose diet had been mostly 'pork and corn.' When we served these children at the table we asked politely, 'Do you want three bites or some?' If they had learned to like Swiss chard or spinach, they wanted 'some'—a full helping; if not, a child was expected to eat 'three bites.' By the end of the summer most of the children were eating a wide variety of vegetables."

Do you consider this a good practice? Why did the youngsters learn to like the vegetables? Can you explain this in terms of habit training?

Do you think the following four statements pretty well summarize the attitude to be taken toward the child's eating?

Be casual.
Avoid issues.
Allow choices.
Don't urge.

If not, what would you add?

June, Mary's little sister, always liked the food her mother set before her until Mary, the adored older sister, complained that she hated milk. Now June refuses milk.

What does this tell you about children's food dislikes?

Donnie, aged eighteen months, was somewhat timid about trying new foods, so instead of coaxing him his older sister bought two baby spoons, each different in color and design. When a new food was introduced, Donnie was given one of the brightly colored spoons to use. He was always so eager to use the gay spoon that he ate everything off his plate.

What does this tell us about children's interest in a new food? Could you adapt this method for use with the baby you are looking after for your family or friends?

If You Want to Know More About Feeding Children

See Aldrich and Aldrich, *Feeding Our Old-Fashioned Children*, Holt, *Care and Feeding of Children*, Hurlock, *Modern Ways with Children* (Chapter 3), and Lowenberg, *Your Child's Food*. Complete bibliographical information on these books may be found under Some Good References, pp. 311–316.

GETTING OUR FOOD

7. TO MARKET, TO MARKET, TO BUY FOOD

For People Who Buy the Family's Food

In buying food for your family, you not only have to make the meals fit the budget, but you have to make the budget buy your family health and eating fun. The more limited your food budget is, the more carefully you will need to plan to get all the foods you need. In many cases you will not only need to plan more carefully, but also you may need to change your habits of planning, marketing, and preparing food.

First of all, you will have to check up on your family's quota of good nutrition. Let the first item in your stock-taking be your own marketing habits. Be truthful in answering the following questions:

Do you make a habit of walking into the grocery store without a list, looking the place over, and buying what impresses you at the moment?

Do you decide at the last minute what the family is to eat?

Does the idea of planning three or four days' meals in advance appall you?

If you do any or all of these things, the chances are that you are a wasteful buyer and you may also have a poorly nourished family. These are habits you will

have to change *now* if you are to do right by your family.

A PLAN'S THE THING

In planning meals and market lists for these meals, plan for an entire week preferably, for at least a single day certainly, never just for one meal. You will remember that the seven basic food groups are set up in terms of the nutritional requirements for a day. Include the fundamental foods needed first. If there's money left over, so much the better. Then you can go in for more variety.

THE BASIC SEVEN IS REALLY BASIC

How can you go about making out your market list so that you can be sure your family gets its quota of the basic seven?

Let's begin by looking at the basic seven once again.

Group One: Green and yellow vegetables—some raw, some cooked or canned—1 or more servings.

Group Two: Oranges, tomatoes, grapefruit or raw cabbage or salad greens—1 or more servings.

Group Three: Potatoes and other vegetables and fruits—raw, dried, cooked, or canned—1 serving of potatoes, 2 or more servings of other vegetables or fruits.

Group Four: Milk and milk products—fluid, evaporated, dried milk, or cheese—1 pint for adults, ¾ to 1 quart for children.

Group Five: Meat, poultry, fish, or eggs—or dried beans, peas, nuts, or peanut butter—1 serving of meat, fish, or legumes, 4 to 7 eggs a week, preferably 1 every day.

Group Six: Bread, flour, and cereals—natural, whole-grain, or enriched or restored. Cereal or bread at each meal—1 serving.

Group Seven: Butter and fortified margarine (vitamin A added) at each meal.

Here are some facts that will help you translate this list of the basic seven into a market list for your family:

The number of servings to a pound of various green and yellow vegetables is about as follows:

Kale, spinach, fresh peas, Lima beans, pumpkin, and yellow squash—2 to 3

Head lettuce, red and green peppers—5

Leaf lettuce, raw salad greens—8

Canned and frozen Limas, green snap beans, peas, carrots—4

The number of servings to the pound of citrus fruits is:

Fresh oranges and grapefruit whole or juiced—2 to 3

Canned oranges and grapefruit in sections or as juice—about 4

Fresh tomatoes—3 or 4

Canned tomatoes whole or as juice—about 4

The number of servings to the pound of potatoes and other vegetables and fruits equals:

Potatoes—3 or 4 servings

Fresh fruit and vegetables—3 or 4 servings

Dried fruit—about 10 servings

A quart of fluid milk makes 4 cups. The following can be counted the same as a quart of fluid whole milk:

17 ounces (by weight, about 1 pint) of evaporated milk
1 quart skim milk and 1½ ounces (3 tablespoons) of butter
5 ounces (about ⅓ pound) American cheddar cheese

The number of servings to the pound of meat, fish, and poultry is:

Cuts with bone, such as chops, rib roasts, poultry, or whole fish—2 to 3 servings
Boned or boneless cuts—about 4 servings; ground meat—5 servings
Ready-to-eat meats—6 or more servings
Dried beans or peas—5 to 6 cups when cooked; makes 8 to 10 servings

One pound loaf of bread makes 18 to 20 slices.

YOU WORK IT OUT FOR A FAMILY

Now let's apply all this information to a family, a family consisting of a father, mother, and four children —a boy aged five, a girl eight, a girl eleven, and a boy fourteen.

Group One: Green and yellow vegetables. One serving each day for every member of the family will require 42 servings—approximately 12 to 15 pounds per week, depending upon what vegetables you choose.

Group Two: Oranges, tomatoes, grapefruit, or raw cabbage or salad greens.

Actually, the family's daily requirements of this group can be met in many different ways, for example, 1 medium-sized orange daily, ½ grapefruit, 1 cup

canned tomatoes or 1¼ cup tomato juice, or ½ large green pepper.

If they use medium-sized oranges daily, 3½ dozen oranges will be needed. Or, if they use 1 medium orange 3 times a week and ½ grapefruit twice a week, they will need 1½ dozen oranges, ½ dozen grapefruit, and 3 quarts of tomato juice.

Actually, in terms of pounds, this family will need approximately 12 pounds of Group Two foods, varying somewhat according to what is chosen.

Group Three: Potatoes and other vegetables and fruits—1 serving of potatoes, 2 servings of other vegetables or fruits.

Potatoes, white or sweet—15 pounds.

Other vegetables and fruits—21 pounds.

Group Four: Milk and milk products—1 pint for adults, ¾ to 1 quart for children.

1 pint of milk for both parents—7 quarts.

¾ to 1 quart for each of 4 children—21 to 28 quarts.

This family will need 4 or 5 quarts per day, or 28 to 35 quarts per week. Of course, less milk is needed when cheese is used. Five ounces of cheddar cheese (nearly ⅓ pound) equals 1 quart of whole milk in food value. If ⅓ pound of cheese is used in a day's meals, 1 quart less of milk is needed. If 1 pound is used during a weekly period, the amount of milk needed is 3 quarts less.

Similarly, 1 cup of turnip greens supplies almost as much calcium as 2 cups of milk.

Group Five: Meat, poultry, fish, or eggs, dried beans, peas, or nuts or peanut butter—1 serving of meat, fish, or legumes; 3 or 4 eggs a week.

Actually, the amount of meat needed will vary from 8 to 10 pounds per week, depending upon the combination of foods from this group used during the week.

In addition, the family will need approximately 2 pounds of dried beans, peas, nuts, or peanut butter.

Each member of the family needs from 4 to 7 eggs per week, a total for the family of 2½ to 3½ dozens.

Group Six: Bread, flour, and cereals—cereal or bread at each meal.

The family will need about 25 to 30 pounds of cereal products.

Of this amount, about 18 pounds will be in the form of bread.

If the family is very active, they will eat even more of the foods in this group.

All flour, cereals, and bread should be whole-grain, enriched, or restored.

Group Seven: Butter and fortified margarine.

From 3 to 4 pounds per week will be needed as spread or in foods.

Bacon and other fats and oils will be needed for food preparation.

Summarizing all this information in the form of a basic market list for a week for a family of two adults and four children, you have:

Green and yellow vegetables	12 to 15 pounds
Oranges	1½ dozen
Grapefruit	½ dozen
Tomato juice and tomatoes	3 quart cans
Potatoes	10 pounds
Other vegetables and fruits	21 pounds
Milk or its equivalent	25 to 32 quarts
Cheese	1 pound
Meat and fish	8 to 10 pounds
Dried beans, peas, nuts, or peanut butter	2 pounds
Eggs	2½ to 3½ dozen
Bread, flour, and cereals, including 18 pounds of bread	25 pounds
Butter or fortified margarine	3 to 4 pounds

The actual food items in each of these categories depend upon the meals you plan for you and your family and the money you have to spend. Of course there are other foods you will need and want, but these are the foods you must have to square with the basic seven.

If you customarily spend a very liberal sum for food, it is suggested that you increase the quantity of eggs, fruits, and vegetables rather than buy a larger amount of sugars and starches.

Of course, making out your meals and market order for a week doesn't necessarily mean that you have to buy all these foods on the same day. Often it is better to buy fruits and vegetables several times a week. This is especially true if you do not have satisfactory refrigeration. If you wish, from your plans for your meals and your master marketing order you can work out shopping lists for each of your marketing days, indicat-

ing possible choices and amounts of food in the essential categories.

GOING TO MARKET

Once you have made out your market list, you are faced by another task—marketing for the food on your

"What shall I have for dinner?"

list. There is much to learn about marketing. Indeed, in many instances, feeding the family is largely a question of knowing how to select and buy food.

Where do you buy your family's food? Does the store have good standards of cleanliness and sanitation? Cleanliness in handling food is just as essential in the

store as it is in your home. Food should be protected in every way possible from dust, dirt, rats, mice, and insects. Sales people should be neat. Basements, storerooms, storage bins and containers, and refrigerators should be clean. It is impossible to get clean food from a dirty store.

PRINCIPLES OF WISE BUYING

Some general principles of wise buying of food can be stated:

1. Plan first; buy later. Don't make on-the-spur-of-the-minute purchases.
2. The most expensive food is not necessarily the best. In buying food we must consider nutritive values and family preferences as well as cost and the way the food is to be used.
3. Shop around if you have time to do so. It often takes time to find the best buy.
4. Read all labels. They're important nowadays. The label on the can tells the inside story; it gives you some idea of the quality of the can's contents and its weight.
5. Watch daily papers for special sales. Sometimes you can get real bargains and stretch your food money.
6. Buy in large quantities whenever possible. Quantity buying often saves money. Your ability to do this depends upon the size of your refrigerator. If bargains spoil at home because of inadequate refrigeration, your money is wasted. It's a wise food shopper who knows the size of her refrigerator.
7. Buy by weight, not by a "dime's worth" or a "dollar's worth."
8. Watch the scales! Don't accept short weight.
9. Buy foods in season.

10. Learn the seasons when certain foods are cheapest.

11. When is a bargain not a bargain? A food is not a bargain unless it contains the maximum amount of nutrients for its size, type, and weight. Nor is it a bargain if it does not

Any good food sales today?

taste as good as that particular kind of food is supposed to taste, nor if it takes too much time and fuel to prepare where time or fuel is limited, nor if it costs too much. Economy consists in spending your money wisely, not in saving it unwisely.

12. If you know about food nutrients you have an advantage over those who don't. You can select low-cost foods which supply the greatest nutritive value for the money spent and can make wise substitutions without sacrificing minerals

and vitamins. The trick in keeping food costs down lies in learning which foods equal which nutritionally, then using the "just-as-goods" to substitute for the scarce and expensive "stand-bys." You'll get some good help in doing this in Chap-

Watching the weight.

ter 2, Food Makes a Difference. See also Other Food Patterns, page 48, in Chapter 3, Checking Up on Your Food.

BUYING VEGETABLES AND FRUITS

Here are some do's and don'ts in buying vegetables and fruits.

1. Buy by weight rather than by measure. Weight should be heavy in relation to size, especially in citrus fruits, lettuce, and cabbage.

2. Buy vegetables and fruits in season. They are not only cheaper but superior in quality to those out of season.

3. Medium-sized vegetables and fruits are best. Oversized vegetables are likely to be tough and fibrous, whereas undersized ones may be underripe and wasteful to prepare. The same reasoning applies to fruits.

4. Leafy vegetables should be crisp and fresh; root vegetables firm, smooth-skinned, and clear in color.

5. Vegetables and fruits begin to lose their vitamins once they are picked. Therefore be suspicious of wilted lettuce, bruised spinach, yellowed broccoli, shriveled fruit, limp celery. The lower price charged for them may tempt you, but remember that, when they are measured in terms of vitamins and palatability, they are poor bargains.

6. The greener the leaves of cabbage, the greater its food value. This is also true of celery and lettuce. We Americans have developed an esthetic preference for bleached cabbage, lettuce, and celery. But we should get over it, for the green leaves and stalks are much richer in vitamins and minerals.

7. Pea pods should be plump, well filled, and bright green in color. They get yellow when they are old. Green beans should break with a snap. If they are limp, they are not fresh.

8. Use dried, canned, or frozen fruits in preference to out-of-season fruits; they are just as rich in protective vitamins and minerals as fresh ones and are cheaper than out-of-season fruits. Take a little time to study the array of dried fruits your grocer has to offer. In addition to the familiar prunes and raisins, you may see dried peaches, stewing figs, pears, and apples in your grocery store. Some of these will be in boxes or packages telling you the size, weight, and moisture content. Some may be in bulk. Remember that the size of dried fruit is not a sign of quality; small prunes of a given grade are just as tender as large ones and may yield more meat for the money spent. And give your family a treat by using canned and frozen fruits, too, during the "in-between" season. You will raise the appetite appeal of your meals if you do.

9. Remember, too, that certain fruits and vegetables are usually less expensive than others. For instance, cabbage costs less than cauliflower, and tomatoes in season less than oranges and vice versa.

10. Before you buy bargains in fruits and berries, look them over carefully, but don't bruise them. If they show any signs of decay, avoid them. Spoiled or partially spoiled fruit is expensive at any price.

11. Buying canned fruits and vegetables instead of fresh when the canned ones are lower in price is an economy. Buy them on the basis of net weight and grade. Select the largest can you can use without waste. A No. 10 can of tomatoes holds nearly four times as much as a No. 2½ can, yet it usually costs only a little more than twice as much. The following are the most common sizes:

Size of Can	*Description*	*Capacity in Cups*
No. 1	A "small family" size distributed principally in cities and used for many fruits and vegetables. Used extensively for canned soups.	1¼
No. 300	Used for specialties such as pork and beans, tomato juice, spaghetti.	1¾
No. 2	This is the most common size, and most fruits and vegetables are available in it.	2½
No. 2½	Used for such products as fruits, tomatoes, sauerkraut, pumpkin, beets.	3½
No. 10	This is the so-called restaurant size, and most fruits and vegetables are packed in it.	13

12. Read labels carefully. Do not buy by the color of the label or the amount of money the producer spends in advertising. Select grades with use in mind.

Whenever possible, buy canned goods which use the United States Government A, B, C, grading: Grade A, finest obtainable product, selected for color, size, and maturity; Grade B, not as perfect as A but still selected for color, size, and maturity; Grade C, good, wholesome, nutritious foods which may lack eye appeal. Some stores carry canned fruits and vege-

tables which are marked, "Below U. S. Standard—low quality but not illegal" or "Below U. S. Standard—good food not high grade." This grade, although it contains broken and irregular pieces, represents food that is clean and wholesome but relatively inexpensive. For certain uses, as in soups and puddings, grades B and C are just as satisfactory as grade A.

Some canneries are now using both grade and descriptive labels. A good descriptive label tells you the weight of the contents, the number of servings, and the type and size of product the can contains. You can tell just what you are buying before you open the can.

13. Frozen fruits and vegetables may be economical to buy because there is no waste. They certainly are economical of time for the busy housekeeper. Price should be considered separately and in the light of the product, the other forms in which it is available on the market, and your food budget.

BUYING MEATS

Here are some facts to remember in buying meats:

1. Be sure that the store you patronize is immaculately clean. Meats absorb odors and spoil quickly.

2. Freshness of meat is another prime essential. Fresh meats have a moist, bright appearance, firm texture, and no odor.

3. Inexpensive cuts of meat are just as nourishing as more expensive cuts. From the nutritional standpoint porterhouse steak is no more valuable than round steak. Cheaper cuts require more ingenuity in preparing, however. The tender, more expensive cuts of meat are from parts of the animal little used; whereas the tougher and cheaper cuts are from muscles frequently used. The most tender cuts are firm in texture, with little connective tissue and relatively more fat, which is evenly distributed when they come from high-grade animals.

Tough cuts are more economical and very nourishing and appetizing if cooked properly.

4. Some kinds of meat are less expensive than others; for example, beef, pork, or lamb liver costs less than calves' liver, and is equally rich, or richer, in food value.

5. Age is an important factor in the tenderness and toughness of meat. Young chickens are more tender than old ones, veal is more tender than beef, lamb more tender than mutton. These younger meats are not, however, more nourishing, and they are often more expensive.

6. The United States Department of Agriculture has established uniform grades of beef, veal, lamb, and mutton. The family food buyer who wants to get what he pays for should insist upon meat with United States Government grade marks. The grades for beef are as follows:

U. S. Prime—highest grade beef, used almost exclusively in restaurants, hotels, clubs.

U. S. Choice—highest grade beef commonly available. Produced from heifers nourished on concentrated food.

U. S. Good—meets the needs of families who have moderate food budgets and who want the best quality they can buy at moderate cost.

U. S. Commercial—for people with "tight" food budgets. Good, nourishing food.

U. S. Utility—lowest government grade. Includes meats which are not tender but which can be made so with careful cooking. These are equally as nutritious as other grades.

The same grade designations are used for veal, lamb, and mutton.

7. Variety meats usually cost less and are just as nourishing or more so. Heart, liver, kidneys, brains, sweetbreads, tongue, tripe, shanks, hocks, and knuckles are variety meats. Ask your butcher about them.

8. Ingenuity in the use of meat extenders will enable you to use less meat when meat is expensive and still retain the flavor of meat in your meals. Cereals, soybeans, milk, and eggs are protein-rich extenders.

9. Select meat alternates carefully. Include foods in your market list that will provide the same nutrients as meat when you plan not to serve meat. Cheese, fish, eggs, milk, soybeans or soybean products, or nuts will make up the protein. Eggs, whole-grain and enriched cereals and breads, green leafy vegetables, legumes, molasses, and dried fruits will add iron. Meet your needs for thiamin (vitamin B_1) by using glandular meats, beans, peanuts, peas, and whole-grain and enriched breads and cereals. Fruits, vegetables, and grains will give niacin. To supply riboflavin increase your milk, peas, beans, eggs, poultry, and fish.

10. Fresh fish should have a firm texture and no unpleasant odor. Because fish spoils rapidly, it reaches markets frozen or packed in ice. If you live near the seacoast, you should find supplies abundant. Inland, look for fresh water varieties such as carp, trout, whitefish, perch, and pike. Available almost everywhere are quick-frozen fish and packaged boned fillets.

BUYING CEREALS, FLOURS, AND BREADS

The following pointers should be remembered in buying cereals, flours, and breads:

1. Cereals in bulk are cheaper. However, they may not be as clean. Does your grocer keep cereals in mice-proof containers? Does he put such food products in cellophane wrappings or sacks for convenience in handling?

2. Ready-cooked cereals cost more but require little work at home. Labels are important on cereals, too, because they often indicate the content and weight. Uncooked and partially cooked cereals cost less and are considered better for

children because they supply more food value for the bulk eaten. In cold weather cereals constitute a good hot dish for breakfast.

3. For the sake of cleanliness bread is usually wrapped for market. Be sure that it's enriched if not whole-grain.

4. Choose whole-grain or restored cereal products—flour, corn meal, grits, and other cereals and breads.

BUYING EGGS

In buying eggs you should know that:

1. All eggs are good eggs if they're fresh. It doesn't matter whether their shells are white or brown. The shells of fresh eggs are rough and dull; old eggs have smooth, shiny shells. Fresh eggs seem heavy in the hand; old eggs, light. A reliable home test for freshness is to drop the egg into a pan of cold water. Fresh eggs sink.

2. Buy eggs out of a refrigerator. They deteriorate unless well refrigerated.

BUYING MILK AND MILK PRODUCTS

No other food requires such care in selection as does milk. Because it is so easily contaminated, it may be changed very quickly from a wholesome food to one that endangers health. In buying milk you should:

1. Be sure you know the source of the fluid milk. Does it come from a healthy and well-cared-for herd? Unless the cows are well fed, the milk will lack important vitamins and minerals. Does it come from a clean dairy that uses the best sanitary methods in handling and bottling milk?

2. Use only pasteurized milk. Often you can save money by buying it at the grocery store instead of having it delivered at your door.

3. Use milk in its various forms. Skimmed milk and buttermilk have had the fat removed either as cream or butter, but they are still good sources of protein and minerals. Dry skimmed milk (fat-free milk solids) has practically the same value as fresh milk and is much cheaper. It is becoming more widely available.

4. If you have no refrigeration, use evaporated or dried milk instead of fluid. Such milk is also good to have on hand for emergencies. Evaporated or condensed milk is usually an economical source of supply. Use it, particularly in cooking. Often irradiated milk, which is a good source of vitamin D, can be obtained.

BUYING FATS

The term fats, as used by nutritionists, includes butter, lard, margarine, salad oils, vegetable fats, soybean oil, bacon, fowl fat, and meat fat. In buying fats remember that:

1. Margarine fortified with vitamin A is a good, nutritious spread for bread, similar in food value to butter.

2. Make use of the fat you pay for. All fats cost money. Even though they are trimmed from the meats you buy, drained from the frying pan, or poured out of the dripping pan, those fats were paid for out of your food budget. Use them in your cooking.

3. A cheaper fat often does as good a cooking job as a more expensive one, and sometimes better.

If competent planning extends over the whole course of meal preparation from the setting up of the menus through the marketing, to the kitchen, and finally to the dinner plate, the family will have no cause to complain about either appetite appeal or nutritional value.

Wise meal planning and marketing are long, long steps toward this goal. Or so Mrs. Martin found. But that's a different story.

TWO GO SHOPPING

This is the story of two people who went shopping for their families' food. One of them might be your

"Oh, dear, I guess I'll have to charge it."

own mother or even you yourself. The adventure upon which this story is based could happen in any town. It could happen in your town.

Mary Jane, aged seventeen, went to market without a plan in mind and had a lot of trouble. Mrs. Martin, on the other hand, had made out her menus a week in advance and had a market list which provided for those meals. She knew exactly what she needed to provide her family, consisting of her husband Terry and her

son John, aged thirteen, and Ruth Ann, aged ten, with a well-rounded and appetizing diet.

Mary Jane and Mrs. Martin live in a community where there are many industries. Mr. Martin and Mary Jane's father and mother work in a factory. As Mary Jane explained to her friends, "My Mom and Pop are both working. I'm looking after my little brother Bobby, doing the housework, and *trying* to get the meals. Bobby is eight, and we've just gotten along swell. I haven't minded the housework, but the cooking . . . well, the cooking is certainly a headache!"

But enough of this general description of what happened when two went shopping. Let's get into the story itself.

Our story begins at the Highland Market. Mrs. Martin is looking at a poster showing the foods everyone must have every day. Mary Jane enters and approaches Mrs. Martin.

MARY JANE: Hello, Mrs. Martin.

MRS. MARTIN: Why, Mary Jane! How are you?

MARY JANE: Fine.

MRS. MARTIN: How does your mother like her new job?

MARY JANE: Fine, although she gets very tired.

MRS. MARTIN *(smiling at Mary Jane fondly)*: She's certainly lucky to have a fine, responsible daughter like you to take over the running of the house. She must be very proud of you, Mary Jane. How is Bobby?

MARY JANE: Fine, now. He had a little cold, but he's better.

MRS. MARTIN: I'm certainly glad to hear that he's recovered. I suppose you're here to do your weekly shopping?

MARY JANE: Weekly? You mean daily, or rather twice daily, shopping. It seems to me that I'm always running out of things and having to run down here. Sometimes I send Bobby down on his bike, but that isn't very satisfactory. So often Mr. Ogden doesn't have what I send him for. I usually wind up by coming down myself.

MR. OGDEN: What can I do for you, Mrs. Martin?

MRS. MARTIN: Go ahead and wait on Mary Jane first. I want to look around a little.

MR. OGDEN: Well, Mary Jane?

MARY JANE: I want a box of raisins, about a dime's worth of rice, two pounds of sirloin steak, a can of beans, a can of pineapple, and let's see . . . do you have any sweet corn?

MR. OGDEN: Yes, we have the corn. What sized box of raisins do you want?

MARY JANE: A medium-sized one will be O.K.

MR. OGDEN: Do you want the packaged or bulk rice?

MARY JANE: Bulk, I guess. I want to make a pudding. That is, I'm going to if I can find a recipe. I am sure Mom has one somewhere.

MR. OGDEN: Did you say a can of beans? What kind do you want?

MARY JANE (*hesitating*): String beans, I guess.

MR. OGDEN: We have them fresh, too.

MARY JANE: But they'd have to be cooked and I haven't time to cook them! No, I think I'll get them in a can.

MR. OGDEN: All right. Joe, will you wrap up two pounds of sirloin steak for Mary Jane? I'll go and get the sweet corn. Do you want six ears?

MARY JANE: Yes, I guess that will be enough.

MRS. MARTIN (*smiling*): Is that what you're going to have for dinner, Mary Jane?

MARY JANE: Yes. I want to have an especially nice one to-night because I know Mom and Pop will be tired and hungry. They always are on Friday nights.

MR. OGDEN: Well, here you are, Mary Jane. That will be a total of $1.89.

MARY JANE: Oh, dear! I don't have that much money. I guess I'll have to charge them and pay for them out of next week's food allowance. Here I am out of money, and two days more to go in this week.

MRS. MARTIN: Mary Jane, why don't you tell me just what you were planning on having for dinner? Maybe I could make some suggestions that would make it cost less.

MARY JANE: Well, I thought I would have steak, baked potatoes, beans, pineapple salad, sweet corn, and rice pudding.

MRS. MARTIN (*to herself*): I'm sure this isn't any of my business, but I know the poor child needs some help. (*aloud*): That isn't so hard to fix. If I were you I think that I'd change my menu a little bit. Why don't you get four or five tomatoes instead of the pineapple? Canned pineapple is pretty expensive. Tomatoes are very cheap now, they're good for you, and you won't have to cook them. Do you have some fresh greens at home for tomato salad? If not, you could buy a bunch of leaf lettuce. How much does two pounds of steak cost, Mr. Ogden?

MR. OGDEN: One dollar.

MRS. MARTIN: Mary Jane, you could get hamburger instead of sirloin steak. It's cheaper. If you added bread crumbs, egg, and some milk to it, a pound and a half would be plenty, and it would cost you only about 45 cents. It might even make two meals. The corn's all right. It's in season and doesn't cost much now, and everyone needs a yellow vegetable frequently.

MARY JANE (*gratefully*): I think those are fine suggestions. How much money would my revised menu cost, Mr. Ogden?

MR. OGDEN: Mary Jane, that would come to 85 cents.

MARY JANE (*laughing*): And I have $1.39. Why, I have some money left. I might even be able to get by tomorrow

on what I have left. Thank you so much for helping me out, Mrs. Martin.

MRS. MARTIN: Now, Mary Jane, don't go flying off. I want to walk up the street with you. Mr. Ogden, here's my weekly list, including the amounts of each food I want. I want them delivered, but I'd like to have you look the list over and see if you have everything that's on it.

MR. OGDEN (*looks over the list carefully, checking each item*): I'm sorry. We don't have any calves' liver today.

MRS. MARTIN (*thoughtfully*): Do you have any pork liver? I could make it into a loaf, and my family would like it just as well. And it's quite a lot less expensive, isn't it, Mr. Ogden?

MR. OGDEN: Yes. Calves' liver costs 60 cents a pound; pork liver, 25 cents.

MRS. MARTIN: Calves' liver certainly isn't worth the difference in price. Pork liver is just as nourishing. I'd like two pounds.

MR. OGDEN: We haven't any cauliflower today. We do have some good broccoli.

MRS. MARTIN: I'll have the broccoli, then. We like it just as well. Good-bye, Mr. Ogden.

MARY JANE: Good-bye.

MR. OGDEN: Good-bye. We'll expect you next week, Mrs. Martin. (*Laughing*) Mary Jane, you'll probably be in on Monday, won't you?

MARY JANE (*wryly*): Yes, probably at least once.

As they walked up the street, the following conversation took place:

MRS. MARTIN: I'm not so sure that you *will* be in the store more than once on Monday, Mary Jane, because I'm going to tell you how you can save yourself all those trips and save money besides. I have a chart that shows the food that everyone should eat every day and how you can plan to get these foods with the money you have. I usually plan my meals a whole week in advance. That way I know just how

much they're going to cost me. And I have an excellent cookbook that I'd be glad to lend you. How much money does your mother give you for food each week?

MARY JANE: Fifteen dollars. I know that ought to be enough, but I just can't figure out how to manage on it. Mom has so much to do when she gets home and she's so tired that I hate to bother her with my problems.

MRS. MARTIN: Fifteen dollars ought to be enough. Why don't you come over Monday morning and we'll work out menus for a whole week in advance? Then you'll be able to juggle your budget so that you can get by on fifteen dollars. It just takes planning. Bring Bobby along to play with Ruth Ann. After you get used to planning, you'll never want to go back to the hit-and-miss method.

MARY JANE: I'm sure of that, Mrs. Martin. I'll see you Monday. Good-bye.

MRS. MARTIN: Good-bye, dear. Remember that we've a date with a chart and a cookbook! (*To herself*) Mary Jane's a sweet girl. Helping her work out her problems will be fun. One of my community responsibilities, I guess.

There are many girls who, like Mary Jane, are taking on new and difficult problems at home. There are, too, fortunately, many women like Mrs. Martin and many girls with a knowledge of nutrition acquired in high school who, if they will take the time and make the effort, can make the lives of many of the Mary Janes much easier. For, as Mrs. Martin pointed out, helping someone with a nutrition and food problem is, after all, a civic responsibility, an investment in good citizenship. Do you know anyone who needs this kind of assistance? You do? What are you waiting for? Be public spirited and give her your help!

But don't forget to be tactful. Remember, too, that you must be willing to help for a period of time. No one can learn to be a good "marketer" in a day. So don't expect the impossible!

Some Questions to Ask Yourself

You go to the store to buy peas, potatoes, beef for roast, and milk. What will you have to consider in selecting each of them?

When is it to your advantage to buy canned vegetables rather than fresh?

In buying meat, cereal, and fat, how can you cut cost without cutting nutritive value? Keep your own buying problems in mind.

Suppose that you are buying a case of canned tomatoes for use by your family. What sized cans will be the most satisfactory? Why?

Suppose that you are buying enough canned tomatoes for a month's supply. Would you buy all of one grade or some of several grades? Justify your plan.

Compare the cost per pound of five or six cereals which your family frequently eats. How do they compare as to food value? Which are the "best buys"?

Make a list of ten foods your family might well buy in quantity to avoid too many trips to the store. Do you have satisfactory space for storing them? If not, which of them are the most practical to buy in quantity? Explain.

Figure out the most economical times of day (and week) for your family to buy its food supplies.

Using the market list on page 144, plan menus for your family for a week (or reduce it by half and plan for half a week). Make out the grocery orders. Now use them. How do they work?

If You Want to Know More About Marketing for Your Family's Food

See Brindze, *Stretching Your Dollar in Wartime*, Maddox, *Eat Well for Less Money*, Monroe, Kyrk, and Stone, *Food Buying and Our Markets*, and the United States Department of Agriculture Bulletin, *Family Food Plans for Good Nutrition*. Complete references to these will be found under Some Good References, pp. 311–316.

8. COOKING CAN BE FUN

For the Family Cook or Someone Who Would Like to Be

If you were to walk into the average American home and tell the person who prepares the meals, "You don't know how to cook," she would probably be furious. Yet the chances are that the statement would be true. Nearly every American household is destroying much of the nutritive value of its food. Although a meal may be wisely planned and the food carefully selected, purchased, and cared for, it may be ruined by improper cooking. All the information included in this book so far isn't going to do your family much good if you don't know how to cook food properly.

The meal preparer in the home has an important responsibility—that of providing the family with the nourishing and appetizing foods which will build strength, vigor, and morale. In a very real sense, too, she is the guardian of her nation's food supply, for upon her depends the effectiveness of its use.

But in addition to being a serious responsibility, cooking can be fun. It makes a fine hobby because it requires imagination, ingenuity, and originality, because it is both a science and an art. Pursued intelligently, cooking can become a real and an abiding interest.

PLANNING WHAT YOU DO

Cooking is like any other job. Planning makes it easier. Before you start, check to see if you have everything you need to prepare the meal you've planned.

If you don't check on supplies early, you may have to go to the store right in the middle of things. Your family may either have to go out to dinner or go hungry until you return.

Certain things can be done ahead of time. Fresh vegetables can be washed and stored in the refrigerator. Dried peas, beans, and fruits will need to be washed and soaked. Rolls, cookies, or cakes may be made the day before. Simple desserts, such as baked apples, apple sauce, or stewed fruits, may be prepared. Some people cook enough breakfast cereal for two days at one time and save both fuel and time.

In planning hot dishes and baked foods, the amount of stove and oven space must be considered. It is possible to cook more than one food even in a small oven if the cooking time is staggered so that each food can be placed in the oven at the proper time, a long-cooking dish preceding a quick-cooking dish. Plan the order of baking so that everything will be ready at once.

When you're cook, waitress, and hostess, plan a meal that is simple to prepare, easy to keep hot, and no trouble to serve. Remember that you are more important to your dinner party than the food you serve. This is important to keep in mind, whether you are

cooking for the family or for a dinner party. So stay calm and serene by:

1. Serving not more than two or three courses.
2. Selecting dishes which can either be completely cooked in advance or made ready for the stove ahead of time and cooked in a jiffy.
3. Choosing foods that won't be ruined if dinner is delayed by a late arrival.
4. Remembering that course-in-one dishes, such as casserole dishes, curries, and hearty salads, are grand hostess helpers.
5. Specializing in flavor. It's not so much what you serve as how it looks and tastes.

When time is at a premium, as it so often is, dishes requiring the minimum amount of your time for preparing should be chosen, e.g., potatoes cooked in jackets rather than mashed potatoes. Potatoes cooked in their skins require only two processes—washing and cooking; mashed potatoes, four—washing, peeling, cooking, mashing. Cooking in jackets also saves valuable vitamins and minerals. Similarly vegetables served with butter or margarine take less time than those served with cream sauce.

Some time and energy savers include the following:

1. Decide what job will take the longest and start it first.
2. Cook foods simply.
3. Save dishwashing by serving foods in kitchen or cooking foods in utensils in which they can be served.
4. Keep work tables clean and in order while you work.
5. Wash dishes and cooking utensils as they are used and put them away. By doing so, you save space and shorten a long, tedious job at the end.

You can work out many other time savers in your kitchen. Cooking is a thinking, as well as a meal-getting, job. Think before and while you cook.

But enough talking about "planning what you do." Let's see how Sue Parks actually managed.

BLUEPRINTS FOR EFFICIENCY

Fifteen-year-old Sue Parks had a problem, a very knotty problem. And it all grew out of the fact that she did some boasting at school.

For a year or two, Sue had been learning at home how to cook a few dishes at a time. Although she had never assumed the entire responsibility for a meal, there were a good many things she could prepare—and prepare well. For instance, Dad was extravagant in his praise of her baking powder biscuits. "Honestly, Susy," he declared, "they just melt in your mouth," and Mother had smilingly agreed that "they are really *very* good."

So Sue had confidence when it came to cooking—"maybe too much confidence," she wondered anxiously.

Polly Dean had been responsible for the conversation that got Sue into her present trouble. She was telling Sue, Ted Reeder, and Allen Bjorsky how well she played the violin. "My music teacher has asked me to play three pieces in the next recital." The boys were visibly impressed and a little in awe of Polly. "Honest, Polly? Are you going to ask us to come?"

Well, that was just too much for Sue. Deep down

inside her, Sue didn't like Polly very well, even if she was the most popular girl in her class at school, at least with the boys. "She's always bragging," Sue had said in explaining her feelings to her mother.

The upshot of it was that Sue did a little boasting on her own account. "Well, of course," she admitted, "I can't even play the piano very well. The only thing I do really well is cook! My Dad says that I'm an excellent cook."

The boys were even more impressed with Sue's accomplishments. They were always hungry, and food was more interesting to them than music. Apparently Polly realized this, for she said, "Oh, yeah! I'll bet you can't cook a whole meal by yourself!"

"I can, too, and I'll prove it. I'll ask Mother if I can have you all over to supper tomorrow night before the basketball game, and I'll cook the meal all by myself."

Mother was a good scout about it. She and Dad would clear out and eat downtown. They liked to eat out together once in a while, and tomorrow night would be a good time to do it.

Sue said laughingly, "Mother, although I won't let you help me with the meal, I wouldn't mind listening to some advice."

Sue's mother smiled and said, "I'm sure you can get the meal all right, Sue, but you'll have to know exactly what you are going to do. An engineer who builds a bridge puts his plans down on paper, doesn't he? That's a good technique for the 'meal-builder' too.

Anyway, it's a good idea for the inexperienced person. What are you going to have?"

"I thought I'd have cheese soufflé, boiled whole carrots, mixed green salad, baking powder biscuits with some of your good plum jam, baked apple and cream, and milk to drink. I can cook every one of those dishes separately. I think I really ought to be able to put them together and make a meal out of them. And I know just how long each one takes me. I want to be sure to have the meal ready at ten minutes past six. The crowd arrives at six."

"That's right, Sue. If you know how long things take, you can plan so that everything gets done on time. But I believe that I'd write it all down if I were you."

This is the way Sue worked it out:

What I am going to do the evening before.

1. Get out the recipes I need from Mother's file and decide how much to make.
2. Check supplies needed for supper. Make a list of any that I lack.
3. Make a list of things to be done and schedule the time for doing them. Figure out just when I will need to begin each task and when I can expect to finish it—sort of a "blueprint for efficiency." Decide on dishes to be used.

What I am going to do in the morning before I go to school.

1. Wash lettuce and green peppers and put in "crisper" in refrigerator.
2. Make French dressing.
3. Give Mother my list to add to her grocery order.

How I am going to get the meal between 4:30 and 6:15.

4:30 to 4:45. Wash, core, and stuff apples. Put on to bake at 5:10.

4:45. Turn on oven.

4:45 to 5:10. Prepare cheese soufflé and put on to bake at 5:10.

5:10 to 5:25. Set table. Set out the sauce dishes. Pour cream into pitcher and set in refrigerator.

5:25 to 5:40. Mix biscuit, cut, and put in cool place.

5:40 to 5:50. Scrub carrots; wash cooking dishes. Put carrots on at 5:50. Remove apples and cheese soufflé from oven. Put soufflé in stove warmer. Increase oven heat.

5:50 to 6:00. Slice green vegetables and place in bowl, add seasoning, toss together with dressing, put on table. Put butter and jam on table. Pour water and milk. Put casserole containing soufflé and the carrots on table.

6:00 to 6:15. Put biscuits in oven which has now reached 450°F. Seat guests at table; serve plates.

6:15. Get biscuits from oven and put on table.

How I am going to serve the meal

I will serve cheese soufflé on the plates at the table and pass the carrots and the salad for each to help himself, then pass the butter and jam, and bring the baking powder biscuits in hot.

I will let Polly clear the table and bring in the apples, sauce dishes, and cream. I'll serve the apples at the table, and we'll pass the cream.

Things worked out almost exactly as Sue had planned them. The boys kept saying, "Wow, can the gal cook!" and Polly laughingly admitted, "The food is delicious." Later Sue confessed to her mother, "She isn't such a bad sport after all."

After dinner all hands turned in and helped clear

up the kitchen, and at 7:30 they were off for the game.

Sue's experience shows us how we can make "blueprints for efficiency" and use the assembly line method in getting our meals.

RECIPES AND HOW TO USE THEM

Good cooking! Magic touch? Special knack? That's all nonsense. You can turn out good cooking if you'll buy an up-to-date cookbook and follow directions exactly. Of course, you have to like and know good food. You can't cook "by guess and by gorry," though, and still expect good results.

If you do not have an up-to-date cookbook on your kitchen shelf, the chances are that you are not getting your full quota of nourishment and good flavor from your food. There have been many new facts discovered and new theories ventured about the best way to cook various foods since many of our standard cookbooks were first published.

You cannot be an up-to-date cook unless you have the basic ingredient to all modern cookery—an up-to-date cookbook containing tested recipes.

Best results are secured when the directions in the recipe are carefully followed. You should read the recipe over carefully and have all the steps in mind before you begin work. Then assemble all the ingredients and utensils and have the oven, if it is to be used, regulated and ready for use.

Remember, too, that the recipes in cookbooks have been tested. If your cooking turns out to be a failure,

think about it. Didn't you take a chance here and there? Probably the failure is your own fault rather than the fault of the cookbook or the stove. Try to find the cause of the trouble.

Accurate measurement is essential to all good cooking. Reliable recipes are not reliable if coffee cups and dessert spoons are used in measuring ingredients, or if a pinch of salt is considered accurate enough. Standard measuring cups and spoons are a good investment for any kitchen.

All measurements are level. A spoonful is a spoon filled level with the top. Half a spoonful is obtained by dividing through the middle lengthwise.

A half pint is the standard measuring cup, which can be obtained with fourths and thirds indicated. Or sets of cups made up to hold one cup, one-half, one-third, and one-fourth of a standard cup are available. These have the advantage of being easy to level off.

There are certain basic articles called for in most recipes that good cooks keep on hand:

Flour
Sugar (granulated, powdered, brown)
Salt
Pepper
Baking powder
Baking soda
Assorted spices
Cocoa
Chocolate
Cornstarch
Tea
Coffee
Cereals
Gelatine
Shortening
Spaghetti
Rice
Honey
Molasses
Vinegar
Vanilla

LOOKING INTO COOKING

Cooking is more fun and results are more certain if you understand the principles underlying the cooking of different foods rather than just doing blindly what the cookbook tells you. Once you know these principles you will understand your cookbook better.

Cooking with a cookbook is like traveling down a well-marked road. Knowledge of the principles underlying cooking is like knowing the destination and general direction of the road as well as having the curves and hills indicated.

VEGETABLES

If you find it difficult to get your family to eat vegetables, don't preach or scold. But do question your methods of cooking them. Perhaps your vegetable dishes suffer from monotony, or you are losing delicious flavor and the appetite appeal of good cooking and texture by using too much water in cooking, by overcooking, or by poor seasoning. You may be forgetting the wide variety of vegetables available at your grocer's in or out of cans and quick-frozen in packages. Here are the essential steps in achieving good vegetable cookery:

1. You will need good vegetables to begin with. Then wash them thoroughly to free them from sand and dirt.

2. Cook vegetables only long enough to get them tender. Modern vegetable cookery requires shorter

cooking periods than formerly were considered desirable. Long cooking destroys the crispness and freshness of vegetables, as well as much of their food value and color.

3. More minerals and vitamins will be retained if you cook vegetables with the skins on. When peeling seems imperative, do it after cooking.

4. Never let vegetables stand in water.

5. Such vegetables as asparagus, green beans, cabbage, carrots, peas, potatoes, and spinach may be suitably cooked by boiling or steaming. Almost all vegetables, but green ones especially, are at their nutritive best when served whole at once after boiling or steaming. Frills and sauces aren't necessary, but, if you want your family to like vegetables, don't forget to season them well.

6. In boiling vegetables use as little water as possible. Do not put the vegetables in until the water is boiling, and remove them as soon as they are tender. With a heavy kettle and tight cover, less water is necessary. Strong-flavored vegetables may be cooked in uncovered pans. This procedure allows some of the strong flavor to pass off with the steam. Green vegetables keep their color better if cooked uncovered.

7. Some people use steamers and pressure cookers for vegetables. The pressure cooker is a great time saver, but you can do a good job without it. Put a little water in the bottom of the pot and cook the vegetables by the steam generated from it. This method will mean a little added care to be sure the

water doesn't boil away and your vegetables burn, but it will pay dividends in more food values retained.

8. Save the water in which vegetables have been cooked, and use it for soups, gravies, or sauces.

9. If vegetables are to be cooked with meat, add the vegetables just long enough before the meat is tender so that they will be well done.

10. Stir vegetables only when you must. When you stir them, you break them up and mix air in, and this destroys some of the vitamins. For the same reason, don't force vegetables through a sieve unless you have to for invalids or babies.

The following table * gives the time for cooking (boiling) fresh vegetables:

Vegetable	*Approximate Time, Minutes*	*Vegetable*	*Approximate Time, Minutes*
Asparagus	15–20	Kale	15–20
Beans, Lima	30	Okra	10–20
Beans, snap	20–30	Onions	30–40
Beet greens	10–15	Parsnips	20–30
Beets, new	30–45	Peas	10–20
Beets, old	60–90	Potatoes, sweet	20–30
Broccoli	15–25	Potatoes, white	20–40
Cabbage, shredded	5–10	Rutabagas	20–30
Cabbage, quartered	10–15	Spinach	5–10
Carrots, new	15–20	Squash, summer	15
Carrots, old	20–25	Squash, winter	20–25
Cauliflower	8–20	Tomatoes	5–20
Chard, Swiss	10–15	Turnips	15–20
Corn	6–10	Turnip greens	10–20

* Adapted from leaflets issued by the United States Department of Agriculture, Bureau of Human Nutrition and Home Economics, *Root Vegetables in Wartime Meals* and *Green Vegetables in Wartime Meals.*

11. Do not thaw frozen vegetables before you cook them.

12. Serve raw vegetables frequently—at least once a day is a good rule. The use of raw vegetables seems to be increasing. Their flavor, color, and texture are appetizing. Lettuce, celery, young onions, turnips, radishes, cauliflower, water cress, spinach, and cabbage are all enjoyed raw. Many people enjoy carrots, celery, and turnips cut into "sticks" or "straws."

13. Make these "sticks" and also raw salad or slaw at the last minute. Vitamin C gets away very fast from foods that are peeled or cut. The finer the cutting, the greater the loss is. If a supply of vegetables which are to be served cold are washed and kept whole in the refrigerator, getting salads and "sticks" ready is simple.

14. Be versatile in preparing vegetables.

Honesty compels us to admit that many people tire of vegetables when they are cooked the same way all the time. Get variety in your methods—bake them, broil them, purée or cream them.

In order to add appetite appeal it may be necessary to dress vegetables up a bit. Remember that foods have to be eaten to nourish your family. So, if necessary, use a little ingenuity. For example, if your family gets tired of potatoes, cook them in their jackets, with parsley and butter, with fresh green peas, or escalloped au gratin. Mashed potatoes we all know, but what about some variations, such as mashed potatoes with chives, or green onion tops folded in, or minced

mint leaves when potatoes are served with lamb? Don't forget, though, that mashing potatoes reduces their nutritive value somewhat; therefore do not serve them this way too often.

Or combine vegetables. Try cooking peas with a small chopped onion and a heart of lettuce, seasoning, and adding a little butter and a spoonful of hot cream to the liquid. Peas are good if heated and well seasoned, with the beaten yolk of an egg stirred in at the last moment. This method uses the liquid, too.

Or try cooking a few young onions with peas and maybe a sprig of mint. Cook them in the smallest amount of water, with a teaspoonful of sugar, and finish by tossing in butter. The family won't be able to put their finger on just what the trick is, but they will want you to do it again.

In meal preparation, plan one vegetable that is easy to prepare and one that is not so easy, for instance, frozen peas with butter and baked stuffed potatoes.

15. Vegetables offer the ingenious cook a good way to extend the flavor of meat. They combine easily to make a well-balanced meal.

16. Overcooking should be avoided in all vegetable cookery. Cabbage used to be cooked two or three hours before it was thought fit for human consumption. We now know that it is better for us if it is cooked from five to fifteen minutes. Shredded cabbage cooked in milk for six minutes is a variation that depends on quick cooking, but so cooked is very good.

HITTING THE HIGH C'S WITH SALADS

Nutritionists advise working into our meals a leafy green or yellow vegetable, raw or cooked, once a day. What better way is there than in a salad? The following are some rules to be observed in making salads:

1. Choose ingredients which will combine well in color, flavor, and texture.
2. All ingredients should be clean, cold, and crisp. They should be well drained to prevent thinning of the salad dressing.
3. Ingredients should be handled lightly and as little as possible.
4. Ingredients should be in pieces of convenient and attractive size. If they are chopped too small, the food value may be reduced. If the pieces are too large, the salad is awkward to eat, and the flavor of the dressing does not penetrate. A happy medium is the best choice.
5. Ingredients should be combined just before serving.
6. Salads should be arranged attractively. Make the most of the natural color and shape of vegetables, fruits, and other foods being used. For variety, certain vegetables and fruits may be given added character and flavor by combining them with a gelatine mixture and molding.
7. There are three types of dressings most commonly used: French, mayonnaise, and cooked. Your cookbook will contain recipes for them.

8. Dressing should be put on salad at the last moment.

FRUITS

Fruits are similar to vegetables in that much of their food value may be lost by improper preparation and cooking.

1. Select fruit for cooking which is as fresh and sound as possible. Fully ripe fruit is usually preferable.

2. Wash fruits well before using. Remove any spoiled parts. Many fruits should be cooked unpeeled.

3. In cooking fruit in water, care must be taken not to overcook it if the shape is to be retained.

4. Add sugar which is to be used only as sweetening just before taking fruit from the fire. Long cooking with sugar delays the softening of the cellulose and obscures the natural flavor of the fruit. If it is desirable to retain the shape of the fruit, it may be cooked in a sugar syrup. Many people prefer fruits, especially dried ones, cooked without sweetening other than the natural sugar of the fruit.

5. Serve raw fruit frequently.

6. Do not soak dried fruits too long. Experiments have shown that the fruit absorbs more water and gives best results in cooking if it is first washed in warm water and then soaked in hot water for a short time. Then cook it only until tender. To save flavor and food value cook it in the water in which it was soaked. Very little, if any, sugar needs to be added.

To add appetite appeal, mix your fruits and your colors. A deep purple plum, a golden, whole apricot, and an ivory white pear served together are lovely to look at and delicious to eat. Fresh yellow pineapple and bright red strawberries are delicious together, as well as pretty. An orange seems plain, but it isn't when orange sections are served in a glass dish and spread with grated fresh cocoanut. Grapefruit sections and pineapple may be added to make "ambrosia."

MEAT

The rules of modern meat cooking are few and easy to follow. The most tender meat can be made tough by improper cooking, and the toughest can be made tender by proper cooking.

Meat cookery is simple once you know a few facts:

1. Tender meat cuts are cooked by low dry heat.
2. Less tender cuts are cooked by low moist heat.
3. Always use a low temperature. Scientific tests have proved that intense heat shrivels meat. Vitamin loss occurs in overcooking.

There are three methods of cooking meat by dry heat and two of cooking by moist heat. Cóoking by dry heat includes:

1. *Roasting.* Meat is cooked in a heated oven in an uncovered pan without the addition of water.

The method known as the constant temperature method seems to be the best way of roasting meat. The meat is wiped with a damp cloth, seasoned with salt

rubbed well into the surface, and sprinkled with pepper. Then the meat is placed on a rack in a dry roasting pan with the fat side up so that it will be a "self-baster." It is then roasted at slow oven heat, 300°F.

It is not necessary to cover, baste, or add water when this method is used.

The use of a meat thermometer assures uniform results. The thermometer is inserted into the center of the roast and registers the temperature at the center. Be sure that it is not touching bone or resting on fat.

When is a roast roasted? Well, that depends on how you like it. The following table * will tell you how long to roast meat to the degree of doneness you prefer:

Kind	*Doneness*	*Interior Temperature, Degrees F.*	*Oven Temperature, Degrees F.*	*Approximate Time, Minutes per Pound*
Beef	Rare	140	300	18 to 20
	Medium	160	300	22 to 25
	Well done	170	300	27 to 30
Pork				
Fresh	Well done	185	350	30 to 35
Smoked	Well done	170	350	20 to 30
Tenderized ham	Well done	160	350	15 to 20
Lamb	Medium	175	300	30 to 45
	Well done	180	300	30 to 45
Veal	Well done	170	300	35 to 45
Chicken	Well done	185	300	28
Turkey	Well done	185	300	20

* Adapted from Alice M. Child and Kathryn Bele Niles: *Food Preparation Recipes*. Second edition (published on cards). New York: John Wiley and Sons, 1942. Meat cards 13 and 14.

2. *Broiling.* Meat is cooked by direct heat over hot coals, under a flame, or an electrical unit. Broiling is usually done in a broiler compartment of an oven; it may be done over the glowing coals of a camp fire.

Meat is placed on a broiling rack about four inches from the source of heat. It is turned for even browning.

3. *Pan broiling.* This method is a variation of broiling. It is done either in a heavy frying pan on a direct heat burner or in a heavy pan in a baking oven. Fat is poured off as it accumulates in the pan.

Cooking by moist heat includes:

1. *Braising.* Meat is browned in a hot pan with a small amount of fat. It is then cooked slowly in juices from the meat or in added liquid, such as water, milk, meat stock, diluted vinegar, or vegetable juices, in a covered pan, either in a heavy container directly over the flame or in an oven heated to 350°F. The acid in tomatoes and vinegar helps to tenderize meat. Meat is often dredged in flour before browning. Pot roasts, fricassees, casserole meats, smothered steaks, and similar favorites are all cooked by braising.

Braising is a good way to cook all less tender meat.

2. *Stewing* means to cook by simmering in moist heat. A stew is a dish made from small pieces of meat with or without vegetables. In making stews and soups, the purpose is to extract the juices of the meat, so it is started in cold water and salt. The cheaper, tougher cuts are suitable for stewing. The slower cooking proceeds, the better.

The types of meat suitable for the various types of cooking are shown below:

Roasting: Beef—ribs, loin, chuck; pork—loin, ham, shoulders; lamb—leg, crown ribs, shoulder.
Broiling (including pan broiling): Beef—tenderloin, porterhouse, sirloin, hamburger; pork—cured ham, cured bacon, chops; lamb—chops.
Braising: Beef—round, rump, flank, chuck; pork—ham, shoulder, chops; lamb—shoulder, leg, chops.
Stewing: Beef—round, rump, chuck, neck, shank; pork—all cuts; lamb—shoulder, breast, neck.

If you are inexperienced you will need more detailed directions for all these methods. You can find them in a good cookbook. Newspapers and magazines often carry tested recipes, also.

Cook meat, then, in the modern way—at moderate heat until done and no longer. Roast or broil a tender cut; braise or stew a tough one.

Vary the seasoning, especially when you use the same kind of meat often. Try a little onion, tomato, or green pepper, a dash of herbs or spices, to give a different taste.

Serve in many ways. Give stew new zest, for instance, by serving in meat pies, as a filling for hot biscuits, or scalloped with macaroni or spaghetti.

Be sure to cook pork well as a health safeguard. It sometimes contains the trichina parasite which is destroyed only by thorough cooking.

Spread the good meat flavor over more meals by mixing meats with bulky, mild-flavored foods. Try

cereals, soya grits, bread, macaroni, spaghetti, vegetables, and sauces as meat extenders.

In many dishes enjoyed by European and Asiatic peoples a little meat is used to season a whole dish. These people also know how to use variety meats in many interesting ways. Look up national dishes in your cookbook or clip them out of newspapers and magazines. They will give you variety in your meals without additional cost.

Variety meats is merely a new term used to describe the group of meats which includes liver, heart, kidney, tongue, sweetbreads, tripe, and brains. The time has come when all of us should get better acquainted with them. They offer exceptional food value and flavor, and cost relatively little.

The principles of variety meat cookery are the same as for other meats: dry heat for the tender ones and moist heat for those that are not tender. And seasoning is more important than ever! Better look up a good recipe if you are going to try something new.

Poultry is meat, and the same principles hold in cooking it—dry heat for young, tender birds, moist heat for older, tougher birds. Young chickens are usually fried, broiled, roasted, or fricasseed (a combination of dry heat for browning and moist heat for tenderness). Older chickens are fricasseed or stewed.

Fish cooks quickly with moderate heat. Baking and pan broiling are the most frequently used methods. Rolling the sections in corn meal or flour before cooking gives a delicate brown crust which is pleasing both

to the eye and palate. Here, again, high temperatures are to be avoided. Long cooking dries out fish.

Bones, trimmings, and meat drippings, once carelessly tossed aside, are now treasured for the fine flavor they give other foods. The bones may be simmered in water to make meat stock for soups, gravies, or sauces. Bones which have bits of meat attached will season dried or fresh vegetables.

Meat trimmings will add flavor to soups, vegetables, and casserole dishes, such as potatoes, beans, rice, spaghetti, macaroni, and noodles. Tasty dressings and stuffings can also be made from scraps of meat. Use all meat juices.

Left-over cooked meat may be served cold as sliced meat or in salads. Or use left-over meats with other foods in appetizing hot dishes such as stuffed peppers, chop suey, browned hash, and creamed or scalloped dishes.

Instead of throwing away scraps of fat, melt and use them. Beef fat is a good shortening for pie crusts. It can also be used for adding flavor to soups and sauces. Chicken fat is excellent for cakes and cookies; bacon fat has many uses for shortening and flavoring.

Strained fat can be stored for a long time in the refrigerator.

Nowadays many of us are making it our business to learn to cook meat properly, to become acquainted with less well-known cuts in the interests of food value and thrift, and to extend the flavor of meat by combining it with cereals and vegetables.

THE WHOLE STORY IN AN EGGSHELL

Slow cooking at a fairly low, even heat is the secret of success in cooking eggs. Rush an egg and it gets tough.

Even boiled eggs shouldn't be really boiled. They are best if the water is kept just simmering. Be scientific in cooking eggs this way. Time them when you cook them. Note the time it takes to cook them the way you like them best. Then remember it and always cook them that way.

Eggs have a variety of uses in cooking. They may be served whole, baked, fried, scrambled, poached, in fondues and soufflés; they may add lightness to a sponge cake, richness to a milk drink or soup, and thickness to custard. Eggs just as eggs are found most frequently on the breakfast menu.

Thus eggs may double for soup, the main dish, or dessert. They are truly versatile.

FLOUR MIXTURES

All foods which contain flour as a chief ingredient are called flour mixtures. These include yeast breads, quick breads, cookies, cakes, and pies.

All contain flour, liquid, salt, and some form of leavening agent. To these may be added other ingredients, such as eggs, fat, sugar, fruit, and nuts.

The nutritive value of these foods may be slight or great, depending upon what is in them. Fluid, evaporated, or powdered milk may be used. These flour

mixtures furnish a way to use sour milk or cream and to get eggs into the family diet.

Check to see that the white flour you use is enriched. Sometimes use recipes calling for whole-grain flours and rolled oats. Molasses, brown sugar, sorghum, raisins, nuts, and soya products are all good foods and can be used in flour mixtures.

Air, steam, and carbon dioxide gas are the three substances used as leavening agents. Sponge cake is an illustration of the use of air as a leaven. Here air is enclosed in the beaten eggs and expands on the application of heat. Steam acts as a leaven when it is generated by heat in mixtures having a large proportion of liquid. Popovers are leavened by steam.

Carbon dioxide gas is formed on the application of heat and moisture to baking powder, and to soda with an acid, such as sour milk, molasses, or cream of tartar. Yeast grows upon sugar in the presence of moisture and warmth to form this same gas.

Success in making flour mixtures depends partly on manipulation. Because of the variation in kinds and proportions of ingredients, you use different methods of combining them.

1. Stirring consists of moving a spoon with a circular motion through the contents of a bowl. For example, when you wish to mix the wet and dry ingredients of a muffin batter, you simply stir. Stir only enough to mix the ingredients.

2. Beating is a vigorous and rapid motion which mixes the contents of a bowl and at the same time turns them over and over in such a way as to incorporate air.

3. Kneading is a method used for making a dough smooth and even by working it with the hands on a board.

4. Cutting in or rubbing in are means of mixing unmelted fat into a flour mixture. In the cutting-in method, two knives are actually used to cut fat into the flour by constantly dividing it finer and finer. In rubbing in, the fat and flour are mixed by rubbing them lightly and quickly between the fingers.

5. Folding in is a process of combining beaten egg white with a mixture. The process is accurately described by the term "folding in." It is usually done with a large spoon.

Modern ovens are equipped with oven thermometers. If there is no thermometer in the oven, a portable oven thermometer may be used. Guessing at the temperature of an oven is difficult and often results in cooking failures and waste. The following tabulation shows what is meant by a hot, a medium, and a slow oven, and at what temperatures different flour mixtures are usually cooked:

Slow—250° to 325°F. for sponge cakes, meringues
Moderate—326° to 400°F. for cakes containing fat and for loaf breads
Hot—400° to 450°F. for biscuits, muffins, rolls, pie

Have your gas or electric company check up occasionally on your thermometer to be sure that it is accurate.

The length of time required for baking varies with the mixture. Biscuits, for example, require only from ten to twelve minutes; a large sponge cake, one and one-half hours.

A good recipe should indicate the time required, the temperature of the oven, and a test for determining when the product is done.

When baking hot breads or cookies which are especially good "just out of the oven," the timing of the baking in relation to the rest of the meal is very important. You want them done exactly at the time they are to be eaten. Some quick breads and cookie mixtures can be made in advance and kept in the refrigerator. Preparing nuts, raisins, and other ingredients in advance will also help prevent last-minute rushes.

CEREALS

There are three important secrets in cooking cereal: (1) use the right amount of cereal, salt, and water at the outset; (2) combine in such a way as to minimize stirring; and (3) cook them long enough to swell the starch and soften the cellulose in order that the starch can be exposed to the action of heat and water.

Cereal should be combined with liquid without forming lumps. The most common method of doing this is to shake the cereal into rapidly boiling salted water so slowly that the water never stops boiling and to stir as the cereal is added. After the cereal has boiled a few minutes, it is usually placed in a double boiler. When cereal is thoroughly done it has a nutty flavor. Cereals can be cooked in milk to increase their nutritive value.

The cooking time needed varies with the cereal. Some are partly precooked in the factory, and for these the directions on the package suggest from three to five minutes, although they are usually more palatable if cooked slightly longer. Most other cereals need twenty minutes or longer. Brown sugar, honey, maple syrup, or fresh fruit are good on cereals.

The method of cooking starches and starchy foods (cereals and flour mixtures) is the opposite of that of cooking proteins (meat and eggs).

As starch cooks it absorbs moisture, and a high temperature is necessary to change this moisture into steam so that the cell walls will burst and allow the starch granules to swell. This swelling is particularly noticeable in cooking rice, macaroni, or cereal.

After this has happened, the temperature should be reduced to complete the cooking. Long, slow cooking develops the flavor of the grain and softens the cellulose, thus making it more appetizing.

SAUCES AND GRAVIES

Sauces are not merely dressings for foods. They are the foundations of many tasty dishes. Soups, creamed dishes of meat, cheese, or vegetables, puddings, and cream pie fillings are all variations of sauces.

Sauces give dishes appetite appeal. Macaroni is bland, almost tasteless, until you add a cheese or tomato sauce. Here the sauce adds pertness. Chocolate sauce poured over vanilla ice cream adds richness and blends the flavors.

Ingredients and proportions vary according to purpose. The liquid used may be milk, water, meat broth, fruit juice, or vegetable juice; the thickening, cornstarch or flour or egg, or a combination. Fat is almost always an ingredient. When used with meats or vegetables, sauces are seasoned; when used with puddings or other desserts, they are flavored.

No matter how it is to be used, there are two requirements for a good sauce, smoothness and thorough cooking. The fine grains of the thickening material must be separated before they are heated; otherwise the sauce is lumpy. This is done by adding cold liquid, melted fat, or some coarse-grained material, such as sugar. This is the first step in making a smooth sauce. Constant stirring as the rest of the liquid is added and the sauce thickens is necessary, too.

Now let's apply what we know to the making of gravy. Gravy can be an asset or a liability. You want it to be an asset to your meal. You have just finished cooking a roast, and you want to make delicious gravy to go with it. First pour all fat or drippings from the roasting pan. Then return two tablespoonfuls to the pan for every cup of gravy to be made. Add two tablespoonfuls of flour and stir over low heat until blended and frothy. Then add one cup of milk, meat stock, water in which vegetables have been cooked, or plain water. Cook, stirring constantly until the gravy has thickened throughout. Simmer for about five minutes until the flour is thoroughly cooked. Season well and serve very hot.

The consistency of a sauce or gravy depends on the proportion of starchy material to liquid. A sauce which is used in a creamed soup is generally in the proportion of one tablespoon of flour to one cup of milk and is called a thin white sauce. For creamed or scalloped dishes, a medium white sauce (two tablespoonfuls of flour to each cup of milk) is used. Croquettes and soufflés require an even thicker sauce.

A sauce is not always thoroughly cooked when it is thick. In a well-done sauce there is no taste of raw starch.

There are many different kinds of sauces—white, egg, fruit, chocolate, hard, to name but a few. A good cookbook will contain recipes for them.

The old dictum, "There's no sauce in the world like hunger," might very well be changed to, "There is no appetite in the world that cannot be whetted by a good sauce."

KITCHEN POLICE DUTY

The washing of dishes and utensils and the care and cleanliness of kitchen equipment are important parts of cooking. How pots and pans are washed may actually affect the way food tastes. Our family's health and our ability to do a good job are affected by the extent to which we keep the kitchen clean and orderly.

Dishwashing is a job that has to be done regularly and with tiresome frequency. It should be done as quickly and with as little effort as possible. Necessary equipment and supplies are:

Equipment	*Supplies*
2 dishpans, or 1 pan and a good drainboard	Soap
Wire drainer or rack (if dishes are to be scalded and left to stand)	Scouring powder
Dish cloths	Water softener, if needed
Dish mop	
Plate scraper	
Dish towel	

To do a good job we must have high standards of cleanliness and management. The following procedure has proved to be efficient in many cases.

1. Remove all grease and scraps of food from the dishes.
2. Pile the dishes and utensils in the order in which they are to be washed: glassware, silverware, china, greasy dishes, pots and pans.
3. Fill the dishpan about two-thirds full of water and add sufficient soap for a good suds.
4. Wash dishes in the order given above.
5. Change the water as often as necessary.
6. Rinse dishes with clear scalding water.
7. Allow the china to dry in the dish rack or wipe with clean, dry towel. (The former method saves time and is usually more sanitary.)
8. Dry the glassware, silverware, and utensils with a towel.
9. Wash the sink, drainboard, dish cloth, and dishpan.
10. Hang the dish cloth and towels on the rack to dry.
11. Return all the dishes, utensils, and supplies to their proper places.

Dishwashing is less work and more fun when the task is shared.

Other phases of kitchen police duty include keeping the stove, refrigerator, pantry, cupboard, and other storage centers clean and orderly.

The stove should be thoroughly cleaned and left in proper condition each time it is used. A dirty stove is unsanitary and cannot give the best results.

Whether an icebox or a mechanical refrigerator is used, it should be washed once a week with water and washing soda and thoroughly dried. The mechanical refrigerator requires defrosting at least once a week. No food should be allowed to spoil in the refrigerator, and strong-odored foods should not be kept in it unless securely covered. Pantries and cupboards should be kept both orderly and clean.

A good way in any family is to post the tasks to be done daily and weekly, together with the name of the person in the family assigned to do them. Kitchen police jobs should be shared by the members of the family rather than left as the sole responsibility of one individual. Almost any job is more fun when two or three people work at it together.

SAFETY FIRST IN THE KITCHEN

Our workroom, the kitchen, must be orderly and safe if we are to be able to center our attention on the job at hand—preparing good, nutritious meals.

Nothing takes the place of care and common sense as guarantors to safety. The kitchen is one of the most common scenes of home accidents. A few cautions may help you avoid them:

1. Never climb on an unsteady chair, table, box, or ladder.
2. Wipe up immediately anything that is spilled on the floor. It is easier and quicker to wipe up the spot than to get yourself repaired at a hospital.
3. Keep matches in a tin box, and don't hang cloths, towels, or potholders over or too near the stove.
4. Don't use gasoline or inflammable cleaning fluid in the kitchen, or anywhere else, for that matter.
5. Whenever you put a pan on the stove, turn the handle toward the inside, where it cannot be reached by a child or hit by a passerby.
6. Keep your hands off the blades of sharp knives. Always cut away from the body.
7. Never leave a pail or tub of hot water on the floor. Someone, especially a youngster, might fall into it.
8. Never try to use electrical equipment if it is out of order. You may only blow a fuse, but, on the other hand, you may get the blow yourself. Do not operate any piece of electrical equipment on a sink or on a stove.

SAY, MISTER, CAN YOU COOK?

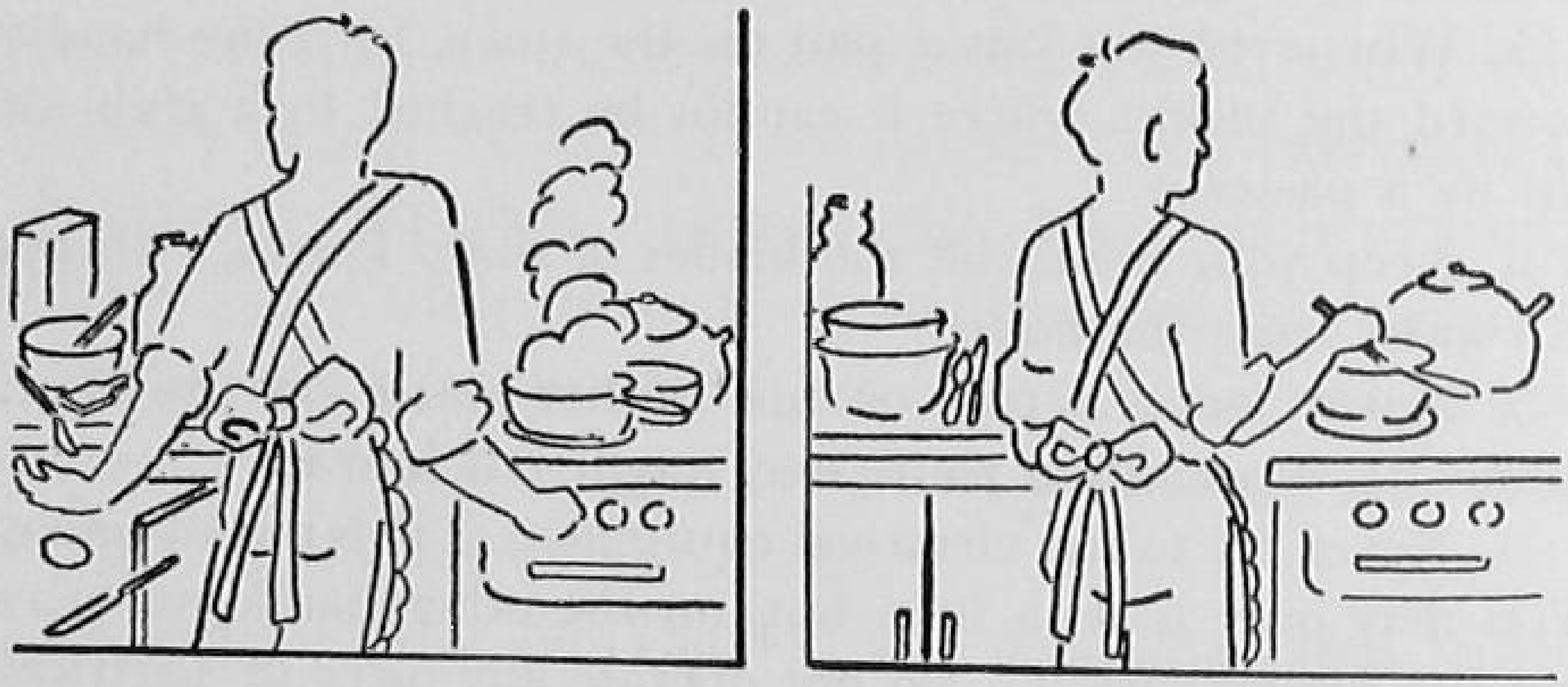
Many situations are made to order for a masculine invasion of the kitchen. There are Sunday and holiday suppers and those occasions when mother, wife, or sister is away, or when some feminine member of the family is ill. Then, too, after a fellow gets started, there may be times when he wants to try his hand at a new dish just for the fun of it.

"But," many of you men will protest, "I don't know how to cook!" Maybe you don't, but that doesn't mean you can't learn, does it?

Mastering cooking—or as much of it as you will need

—doesn't mean that you have to learn all the "ins and outs" of cookery. Many men and boys have made quite a reputation on a few dishes. They have developed a specialty.

But let's have some general cautions before we go into this matter of specialties. First, go about the job



A nuisance. A budding "Oscar."

Which of these are you?

systematically so that you don't get tangled up before you are half started. Before you begin, look at the recipe, see what you need, and then take stock of the kitchen and see where things are. Some boys and men can prepare a bang-up dinner if they have three or four people waiting on them. Cooking takes both head work and leg work. You have to do both, but you can save on the leg work by good planning. Be independent. Get all your utensils and materials together where they will be available when you want them.

Second, don't wreck the kitchen. Don't mess up every pan, plate, and spoon you can find. Either you

or someone else will have to clean them up. If someone else has to do it, she is likely to form the opinion that you are more of a nuisance than of a budding Oscar of the Waldorf.

Now for some suggested specialties. In exploring the possibilities for a specialty, don't ignore meat loaves. There are several types of meat loaves, and the man who goes into this type of cookery had better master more than one kind.

You can get variety by combining flavors: a few slices of bacon ground with beef, some pork with veal, a combination of fresh pork with ham. Even three or four left-over sausages may be used to add flavor.

It's seasoning that counts. A bit of curry, a dash of chili powder will give your meat loaf a slightly exotic flavor. Always add a little onion, and sometimes garlic; a dash of Worcestershire or Tabasco sauce, horseradish—any of these may be used.

Then something is needed to hold the loaf together. You don't want your meat loaf to look like hash! A white sauce, bread crumbs, soya grits, cooked rice, mashed potatoes, tapioca or other cereals, and eggs are all possibilities. A good cookbook will contain recipes featuring all these variations.

When you have learned how to make a meat loaf, experiment with ways of serving it. Sometimes be dramatic and serve the meat loaf on a plank with a border of mashed potatoes and mounds of peas and carrots for a garnish.

Here's another good specialty. Put layers of sliced

cabbage and apples in a baking dish, lay fried sausage cakes on top, cover, and bake until the cabbage and apples are tender. These are sausage cakes with a bit of a flourish and an air of sophistication.

The man who wants to get a specialty should do some intense research on stew making. There is nothing that will pay him bigger dividends.

Books could be written about stews, and every country could contribute a chapter. Irish stew is a thick, rich lamb stew which hits the spot. The English make a rich beef and kidney stew, hearty and filling, and the Hungarians have their goulash. You can make stew in any language. Many standard cookbooks contain recipes for all these varieties of stew.

Or top a stew with pastry, biscuits, mashed potatoes, or mush. Meat pies such as these, either family size or individual, are delicious. Try them some day!

Or turn to other foods of different countries for your specialty. What about Italian spaghetti, Spanish omelet, Mexican chili, Chinese chow mein, or the German dish, pigs' knuckles and sauerkraut? And then there's Russian borsch.

Try ground beef broiled on toast. Toast bread on one side. Spread the untoasted side with raw ground meat. Broil under direct heat. This is a favorite with children. And have you tasted pigs in blankets, with oysters as the pigs and bacon slices as the blankets, and the whole concoction baked in a shallow dish?

Or scallop browned slices of liver with alternate layers of potato slices and a little onion. Cover with

milk, bake till potatoes are tender. Or use cooked rice, macaroni, or noodles instead of potatoes. Whatever you use, your family will ask for seconds.

Or become a soup specialist! Try something unusual. Look up a good recipe for bean soup, and then add finely chopped peanuts, tomatoes, carrots, or just a little crisp bacon, chipped beef, or cooked sausage. Or blend peanut butter with sieved tomatoes for soup. Don't forget soups and chowders using clams and oysters. There are many different kinds of soup, and any of them can be developed into a specialty.

If served with a mixed vegetable salad, any one of them can be considered a whole meal.

Obviously the possibilities for specialties are endless, as endless as your imagination and ingenuity and the cookbooks in your home and library.

Boys and men, as well as girls and women, may find that cooking for fun is a satisfactory hobby! Why not try it? And, if you do, don't forget to make your meals measure up to the requirements of the basic seven.

Many a boy or man has developed cooking as a hobby only to find that his skill turned out to be a life saver when he was faced with the task of temporarily taking over family meals.

WHEN CHILDREN COOK

If you look back to the time when you were small, you'll find that some of your most vivid memories concern food and its preparation.

Remember what fun you had with the little piece of dough mother gave you to make "your very own" pie? Remember the time Dad showed you just how to put the steak on the skewer and hold it over the fire until it was cooked to a delicious tenderness? Or how you helped Grandmother make Heaven cake by stirring the batter in the blue bowl? Or how you and your older sister made the molasses cookies you always had at Christmas time? Remember?

You can see to it that your small brother or sister has many fine experiences like these to remember. For you can make them possible.

Every child should know something about cooking. But he can't learn unless the folks in his family give him a chance.

All children enjoy food—they enjoy eating it, touching it, and preparing it. Remember yesterday, when two-year-old Johnny stuck his chubby fist in his warm cereal. He did it just because he liked the feel as well as the taste. What's true of Johnny is even more true of three-, five-, six-, eight-, and nine-year-olds. You don't have to sell the idea of cooking to children. Given an opportunity, they enjoy it thoroughly.

You may think it is much easier to do things yourself than to explain how they are done to your younger brother and sister. And it probably is. But doing a job yourself is not the way to give youngsters the experiences they need. Jimmy and Jane want to help, and you should encourage them to do so.

So take a strong grip on yourself, and promise that you won't get nervous when the youngster spills flour or get cross or scold if he makes a mistake or takes longer than you think he should. Then give him a chance to have some fun in learning how to cook.

Susan likes to help.

The little child can start his cooking ventures by greasing a pan for the cake you are making for supper. At first it will probably take him as long to grease the pan as it will take you to make the cake, so start him early. And don't hurry him.

After greasing pans has lost its charm, let Jimmy or Jane try other things. One girl let her four-year-old sister stir the ingredients in a bowl while she added others. When the youngster was a little bigger, she let

her help with the measuring. And still later, the little girl enjoyed carefully spreading frosting on cup cakes.

Even the youngest child can squeeze dough and poke and roll it. Let him get a small pie ready for the oven while you're getting the larger one ready. When he is a little older, he will delight in using a cookie cutter to cut dough into heart, diamond, or animal shapes, or just plain round cookies. And he doesn't have to be very old to do this, either.

Young children also enjoy preparing vegetables. They can shell peas, wash potatoes, clean lettuce. Carrots for salad can be washed by the child, scraped by mother or older sister, and then handed back to the child for slicing on the breadboard.

They can wash apples and arrange them in a baking dish, putting sugar in the stem cavities, dabbing on butter, pouring a little water in the pan, and placing it in the oven. They love spreading soft butter, jelly, jam, or cream cheese on bread, toast, and crackers.

When the youngster is a little older, say five or six, he will enjoy arranging salads. Crisp lettuce can be placed on plates. Pieces of canned fruit and dabs of cottage cheese can be put on the lettuce, and the whole thing topped with salad dressing. Tomatoes are usually too soft and squashy for young hands to slice, but children can cut them into quarters.

Children six and seven years old can learn to make such simple things as toast, cereal, and hot chocolate. Eggs can be put into cold water and brought to a boil.

Breakfast is a good meal for children to learn to pre-

pare because so many breakfast dishes are simple. By the time the youngster is nine or ten he will be capable of preparing all the essential foods.

By the time the child is able to read he is ready to attempt the preparation of simple recipes. Simple soups, meat dishes, vegetable dishes, biscuits, muffins, and cup cakes are all foods that eight- or nine-year-olds can prepare.

Be sure that the recipe is one with which the child can have some assurance of success.

Of course, all work in the kitchen by children should be supervised. Boiling water and hot grease should be kept out of their reach.

Although you are present to help the child if he gets into difficulty and to safeguard him against danger, let the youngster work in peace and with as little meddling and direction on your part as possible. Treat both his successes and his failures with pleasant matter-of-factness.

The time may come when the youngster won't want to cook for a while, when the novelty will have worn off. Don't force him. Cooking is like swimming—once you have got the knack of it, you don't forget it.

Children who have a chance to learn to cook when they are small will enjoy cooking when they are grown up, for they will have learned to look at food with imagination, not just as something necessary to health each day (although that attitude, too, is very important) but as something capable of infinite variety and

change, as something representative of a person, as a form of self-expression, as an enjoyable and pleasant activity.

COOKING GYPSY STYLE

Outdoor cookery is fun, and, properly managed, it intrigues people of all ages. A good meal cooked outdoors can be the outstanding feature of a picnic, an excursion, a hike, or science trip.

Some families have constructed fireplaces for this very purpose in their backyards. Parks often have such facilities, too.

Fortunately, however, such elaborate equipment is not essential. A discarded kettle, a frying pan (preferably iron or other heavy metal), and a grill to use over a campfire are all the equipment needed for cooking delicious meals outdoors.

The grill can be a piece of gravel screening, a discarded metal door mat, or an old oven grate. Of course, you will need dishes, preferably paper ones, on which to serve the food once you have cooked it. A large market basket is fine for bringing food to the picnic spot.

Of course, a fire is the first essential. A blazing one is satisfactory for boiling water, but for broiling, roasting, or stewing a blazing fire is a real nuisance. Low, glowing embers are best. Keep your fire small and concentrated in area.

There are so many novel ways of cooking and so many different kinds of food to be cooked that it

seems a pity to keep on year after year with the old standbys of wieners and hamburgers, good as these are. Let's look at some of the other possibilities.

The following can be cooked directly on a grill over coals:

Chicken (cut in pieces)	Hamburgers
Spareribs	Sausages
Chops	Oysters on shells
Steaks	Split fresh fish
Wieners	

The grill, supported by rocks, is placed over a trench containing a bed of coals. If the trench is rock-lined it will give off more heat. The food to be cooked is placed on the grill and turned from time to time by a forked green stick.

Each of the following items can be cooked on a pointed green stick or on long skewers made of stiff wire:

Kabobs—cubes of beef, lamb, pork, liver, kidneys, sweetbreads, or oysters strung on a stick and then held over the fire.

Meat can be alternated with onion slices, small tomatoes, squares of bacon.

Chops.

Sandwiches or "toasts," such as ham and pineapple or apple, cheese and bacon, apple butter and bacon.

Green corn.

Chicken can be fried out of doors. Roll each piece in flour, sprinkle with salt, and fry with bacon and some butter in a covered frying pan resting on the

grill. Hamburger, sausage, steak, pork chops, bacon, sliced ham, fresh fish, potatoes, and eggs can all be cooked in a frying pan over a fire.

Sometimes keep chicken intact and barbecue it over a camp fire on a spit. The spit piercing the chicken can be made out of a green peeled stick supported on upright crotched sticks on either side of the fire. The whole trick is to keep the chicken moving. You'll swear that you have never eaten chicken that tasted so good.

Wood coals impart a savory delicacy that no other cooking fuel can match. Try preparing ducks, turkey, all kinds of game, and small roasts on a spit.

By all means, bake potatoes. Scoop out a basin-like depression toward the front of the campfire, fill it with coals, and keep up strong heat for half an hour or so. Then clean out the hollow, place the potatoes in it, and cover them with hot ashes. Potatoes should be baked for about three-quarters of an hour. Then scoop the potatoes out of their jackets and serve with butter and seasoning.

In roasting green corn, remove one outer husk, break off about an inch of silk end, and twist the husk tightly down over it. Then bake in the same manner as potatoes. Baking takes about an hour.

Or try a cattle range concoction known as "cowboy's delight" for a main dish. Two onions are boiled together with potatoes, then a can of corn beef is added. It is really delicious.

Griddlecakes or flapjacks are one staple of outdoor cookery that should be within your cooking possibilities. Mixing some palatable cakes is easy with the many good brands of self-rising flour on the market. Or make your own mix by putting the dry ingredients together in advance. The batter should not be too thick to pour readily. All flour lumps should be beaten out. Get the frying pan piping hot on the grill.

To grease the pan, rub it with the fat side of a bacon rind. When the batter starts to bubble it is time to turn the cakes. They will be light and will touch the spot with any hungry picnicker.

Mulligan stew is still another dish which is simple to make. Melt half a cup of fat in the frying pan, and slice three medium-sized onions into it. Season with salt and pepper and fry until brown, then add one pound of lean meat and continue to fry until the meat is also brown. Then place two pounds of sliced potatoes over the meat and one or two green peppers which have been cut into strips. Pour over the mixture a small can of tomatoes. Season to taste. Allow the stew to simmer about twenty minutes. When the potatoes are cooked through, the stew is done and ready to serve. This is Mulligan stew that *is* Mulligan stew!

Instead of bread, you may like corn dodgers. They are made from a batter consisting of equal parts of corn meal and water with salt added. The mixture is fried in thin slices in a frying pan.

A fresh vegetable salad prepared at home and brought along adds other vitamins and minerals to an outdoor meal. Tomatoes may be washed and eaten whole. Raw carrots and cauliflower flowers or other raw vegetables help round out the meal. Coffee or cocoa prepared on the scene adds that extra savory note essential for a perfect picnic. When fresh milk cannot be managed, powdered, condensed, or evaporated milk may be used in the cocoa. Finish the meal with fruit, a honeydew melon or watermelon, and your favorite cookies. Apples are always good, too.

Experience with outdoor cookery will teach you many things and lead you to adapt many of your favorite indoor dishes to the outdoors.

The following menus have been used on successful picnics:

Barbecued chicken
Buttered buns
Pickles, radishes
Small raw tomatoes
Fresh fruit and cookies
Coffee or milk

. . .

Oranges
Scrambled eggs with chopped bacon
Corn dodgers
Marmalade
Cocoa

. . .

Kabobs with onion slices
Buttered buns
Potato chips
Peaches
Coffee or milk

Cowboy's delight
Honeydew melon
Cookies
Cocoa

Going on a picnic gypsy fashion can be as much fun as going to a circus. There's the same thrill of ex-

pectation, the same carefree gaiety, with just the right tang of the primitive added. Cooking out of doors! How it can whet your appetite for wholesome food!

For you cooking is a science!

For you have discovered that if you square up your day's meals with the basic seven and observe the principles of modern cookery and good management in preparing them, you can serve meals that are *good* and *good for* your family. Lady Luck doesn't preside over your kitchen!

And for you cooking is an art!

For you blend flavors and colors. You add a dash of inspiration and ingenuity to your meals, as well as including the basic seven.

And for you, cooking is fun!

For you pursue it as a hobby. You strive for skill. You get a thrill out of producing a nutritious meal. A new dish is an adventure, a new way of meeting the requirements of nutrition, an achievement!

Some Questions to Ask Yourself

What vegetables have you used this week that are high in vitamin C content? Did you prepare them in such a way as to preserve the vitamin C?

What foods do you most enjoy preparing? Why?

How could you help a younger sister or brother develop a "cooking specialty"?

What could you do to interest your family in trying out a new type of variety meats?

Why should a salad made of raw vegetables be prepared just before serving? Suggest ways of preparing it so as to avoid a last-minute rush.

How do you account for the fact that low cooking temperatures are recommended for both eggs and meats?

How long would it take you to get the following supper for six if the beans were already baked: baked beans, mixed green salad, brown muffins, milk, raspberries and cream? Describe the order in which you would do the tasks. Would this be a good meal to serve if you were cook, waitress, and hostess? Why?

If You Want to Know More About Cooking

See Bradley and Loggans, *Nutrition Simplified,* Brown and Brown, *Look Before You Cook,* Halliday and Noble, *Hows and Whys of Cooking,* Murphy, *Wartime Meals: How to Plan Them, How to Buy Them, How to Cook Them,* Shay, *The Best Men Are Cooks,* and two United States Department of Agriculture bulletins, *Poultry Cooking* and *Meat for Thrifty Meals.* Complete references will be found under Some Good References, pp. 311–316.

9. DON'T WASTE THE FOOD YOU PAY FOR

Everyone Can Help Prevent Food Waste

According to some authorities, Americans waste from twenty to thirty per cent of the food produced each year in the United States; the losses occur in harvesting, storing, and shipping food, in selling it, and in using it in our homes. Of this huge waste of food, one-fourth to one-third takes place in our homes. The average American family wastes four hundred pounds of food a year.

Some of this food isn't selected intelligently, some isn't prepared right, some is left on plates, some is thrown away, some isn't stored properly. But all these practices waste food. This waste can be stopped right on American plates and in American kitchens.

Check yourself and your family against the questions that follow to be sure that your food isn't wasted.

DO YOU PLAN YOUR BUYING CAREFULLY?

Food saving starts with food buying. Figure amounts to be purchased ahead of time. Buy only what you need and use all that you buy. Determine your family's needs before you buy. Do you use sense and buy by weight rather than cents?

Chapter 7, To Market, to Market to Buy Your Food, will help you plan your buying ahead and in the correct amounts.

DO YOU SERVE NUTRITIOUS MEALS?

Get all the essential foods into your family meals every day. An easy way to be sure of doing this is to check your day's food against the seven basic groups. Providing nutritious meals takes thought and careful planning.

Meals that do not include these seven basic groups daily are a form of waste. They waste the very fiber and spirit of America, the well-being of her citizens.

DO YOU PREPARE FOODS CAREFULLY?

Be a pot watcher. Save health values by quick cooking of fresh vegetables, slow cooking of meats. Do you cook vegetables whole and in their skins? If you dice or cut them, you lose food values. This holds true for soaking them in water, too. Do you keep temperatures low when you're cooking meat? Remember—less shrinkage, more servings. Chapter 8, Cooking Can Be Fun, will tell you how to conserve food values.

Food ruined or wasted in the process of preparation represents a triple waste—of time, of fuel, and of food.

DO YOU LICK THE PLATTER CLEAN?

Don't let your eyes be bigger than your stomach. The slogan, "Take all you want but eat all you take,"

is a good one for American homes. Give or take small servings first, and plan on seconds or even thirds.

Don't waste food just to observe some fine point in table manners. Pick up the bone and bite off the last shreds of meat. Eat all your salad. Squeeze the grapefruit dry. Such practices may not be the best in table etiquette, but they're tops in food conservation.

Remember, too, that to urge second helpings when folks aren't hungry isn't hospitality, it's waste!

DO YOU USE ALL THE EDIBLE PARTS OF FOOD?

Use everything that's edible. Cheat the garbage can! Green leaves of celery, cabbage, and cauliflower contain minerals and vitamins, yet many people throw them away. Don't be guilty! They should be used in salads, stews, sauces, or soups.

Cook potatoes in their skins and apples, too. Use the same practice in preparing carrots, turnips, beets. Beauty may not be skin deep, but vitamins and minerals are. Potato skins are good to eat.

Save the tops of beets and turnips. Use them as greens or in salads.

Use every scrap of meat, bones, and trimmings in soups, stews, meat-alternate dishes. Use the oil in which canned fish is packed for salad dressing. Serve the water in which vegetables are cooked in soups, sauces, gravies, or vegetable cocktails.

Don't waste egg yolks by letting them dry up. Keep them in the refrigerator covered with a little cold water. Use two egg yolks plus one tablespoonful of

milk in place of one egg in cookies. In custards or salad dressings, use two egg yolks in place of one egg. Scrape butter or margarine off plates after meals and use it in cooking.

Don't throw away the "heels" of a loaf of bread. Crusts may not make your hair curly, but they do contain valuable food nutrients. Don't burn bread in the process of toasting it. Use it before it molds.

One slice of bread thrown away doesn't amount to very much, does it? But multiply that loss by our nation's thirty-four million homes—thirty-four million slices of bread!

A saving well worth making, isn't it? So begin by not wasting bread in your home!

DO YOU STORE FOODS CORRECTLY?

Prompt and proper home storage helps prevent spoilage and vitamin loss, both forms of waste. Be sure that you know the right storage place and temperature for each food you buy.

Food stored at too high or too low a temperature will spoil. And spoilage is waste!

Milk. Letting the morning milk wait on the doorstep or, if you live on a farm, in the milk pail before separating or straining, increases bacterial content and reduces vitamins. Therefore put milk into the colder part of the refrigerator promptly. Milk should be kept cold, covered, and clean. It also should be kept away from foods that have an odor, such as fish, onions, cabbage, and melons.

Don't combine one day's supply with another's. The older milk may spoil the whole supply.

Meat. Meat and poultry should be kept in the coldest part of the refrigerator. Cover fresh meat loosely. Cool meat broth rapidly, keep cold, and use soon. Keep cooked meat covered and cold. Keep meat sandwiches and salads cold right up to the time of serving.

Wash poultry thoroughly inside and out, pat it dry, and store it very cold until you are ready to cook it. Uncooked, well-cured meat may be kept in a dark, dry, airy place until it is time to cook it. Wrappings should be kept on ham, bacon, and other cured meats until you are ready to cook them.

Fish and all sea foods should be wrapped in waxed paper to keep odor away from other food and stored very cold.

Eggs. To retain freshness and good flavor, keep eggs in the refrigerator. It is a mistake to keep them elsewhere, either at home or in a store. Don't wash eggs before storing; water destroys the protective film that keeps out air and odors.

Butter and margarine. Because light destroys some vitamin A, butter and margarine should be kept covered, clean, and in a cool place. Don't let them stand on the kitchen table any longer than necessary.

Vegetables. Remember that the fresher vegetables are when they are used, the better they taste, the less waste there is, and the more vitamins are retained.

To make crisp the lettuce, radishes, celery, and other raw vegetables needed for a salad, wash them, drain

them, store them in a covered vegetable pan, and keep them cold. Pile cooking greens loosely to prevent bruising. Keep them cold. Wilt not, waste not!

To retain the sweet taste in corn, peas, and Lima beans and the snap in snap beans, keep them cold. Corn should stay in the husk and beans and peas in the pods until just before they are cooked.

Keep squash in dry, cool storage. Beets, turnips, rutabagas, carrots, and other root vegetables should be kept in a cool, well-ventilated place. Cut tops to two inches to save space. Leave cabbage, cauliflower, Brussels sprouts, and broccoli whole and keep them cold and not too dry.

Sweet potatoes, white potatoes, and onions keep best in a dry, cool, dark place, but not one cold enough to freeze them.

Unused canned vegetables may be left in the can if they are kept in the refrigerator. For maximum food value, keep packaged, quick-frozen vegetables frozen until you are ready to use them, then cook them without previous thawing.

Fruits. Oranges, lemons, and grapefruit may be left in or out of the refrigerator. The juice from these citrus fruits may be stored in the refrigerator if tightly covered. However, there will be a flavor change and some loss in vitamin C.

Whole tomatoes retain their vitamin C well for considerable periods of time either in the refrigerator or at room temperature. Canned tomato juice may be

stored covered in the refrigerator for as long as twenty-four hours after opening the can with no appreciable loss of vitamins.

To keep berries, cherries, and grapes in prime condition, store them in a shallow tray in a cold place. Wash them just before using. Handle apples, peaches, and soft berries gently. Keep bananas at room temperature.

Bread, cereal, and flour. Bread should be kept in a closed bread box or other container that has a few holes in the top or sides to let in a little air. Small families often keep bread in the refrigerator with good results.

Don't try to store much flour and cereal over the hot months; buy less and oftener. Store in tight containers.

Flour or cereal that gets "buggy" is wasted.

DO YOU MAKE GOOD USE OF LEFT-OVERS?

Avoid vitamin loss by not cooking any more food with high vitamin content than your family will eat at one meal.

But if, despite careful planning to avoid them, you have left-overs of this type, be sure to use them as promptly as possible. Don't let your refrigerator be just a stop-over for left-over foods on the way to the garbage can. Remember, too, that reheating left-overs, such as vegetables and meat, causes further vitamin loss.

Certain kinds of left-overs should be planned for. Rice, macaroni, and other cereal products may be cooked in sufficient quantities for more than one meal.

The important thing about many kinds of left-overs is *not to have them.*

DO YOU MAKE THE BEST POSSIBLE USE OF FATS?

Save all fat from bacon, meat drippings, soup skimming, meat trimmings. Use what you can for cooking. Chapter 8, Cooking Can Be Fun, will suggest good ways of using fats.

Food should never be wasted. Many's the kitchen where elusive vitamins, precious minerals, and delectable flavor are lost unknowingly in buying, cooking, serving, and storing foods. To waste food is like going around with a hole in your pocketbook. Either way, you are losing money.

In this chapter we have told you about many ways to reduce food waste, seen and unseen. Check those precautions you know about and are practicing now. Then concentrate on the others and make them a regular part of your kitchen procedure.

Every food element for which you pay should be used. If you throw away part of the meat you buy, or if the nutritive value of fresh green peas is decreased through poor cooking methods, you are wasting the food you paid for.

What is worse, you may be depriving others from getting foods which are greatly needed.

Some Questions to Ask Yourself

What are good ways of using such usually wasted foods as fat drippings, vegetable tops, stale bread?

Why is it important to store meat in the coldest part of the refrigerator?

Make a list of specific ways you can lessen food waste in your kitchen.

What arrangements do you have for storing root vegetables in your home? Do these meet the requirements for good storage?

Why should you use vegetables immediately after they are gathered from the garden or as soon as possible after buying?

If only one-half slice of bread per person were wasted in your family each day, figure out the cost of such waste during one year.

Why is it usually a good plan to cook only enough green vegetables for one meal?

Does a recipe which makes twelve muffins make the right amount for your family? If not, what proportion of the recipe should you prepare?

How many pork chops would you order for dinner for your family? What is the approximate weight of this order and the cost per chop?

When you throw away the water in which cabbage is cooked, what food values are you discarding?

Compare the value of carrots cooked whole with skin on in steam, and carrots diced and cooked in water.

If You Want to Know More About Preventing Food Waste

The United States Department of Agriculture leaflet, *Cut Food Waste,* and Maddox's book, *Eat Well for Less Money* (Chapter VIII), will tell you many ways of preventing waste. The Department of Agriculture bulletin, *Home Storage of*

Vegetables, and the United States Office of Education leaflet, *Negro Farm Families Can Feed Themselves,* will give you more information on proper storage methods. Complete bibliographical reference to these will be found under Some Good References, pp. 311–316.

10. HOW DOES YOUR GARDEN GROW?

For the Family Gardener and His Helpers

OUR great grandparents, many of them, raised their own food. What they didn't raise they didn't eat unless some neighbor had a surplus of certain vegetables

A gold mine of information.

which he was willing to sell or trade. Nowadays most families do not have to depend on their own efforts in gardening for the food that graces their tables. And this is fortunate, for many families who dwell in cities simply do not have space for gardens.

But for many families who do have space the food they can raise in their own backyard has a definite value in terms of both money and buoyant health. If you don't believe that a garden is a good investment from the point of view of money, ask a good gardener to balance the value of the vegetables he raises in his garden against that of the same food on the market. Usually vegetables from your own garden cost less and taste better. Remember, too, how rich vegetables which are fresh and crisp from your garden are in vitamins and minerals, and you'll be convinced of the advantage to health.

Working in a garden, watching the plants grow big and strong, and eating the produce are fun. Gardening is fun, but it is also work.

WHO SHOULD GROW A GARDEN?

Who should have a garden?

The answer is, "Everyone who has the space, the time, and the energy." Anyone who has access to a sunny plot of ground twenty-five feet square or even smaller, who can devote four or five hours a week to gardening, who enjoys working in the outdoors, should have a garden.

If a home garden is not available, often a plot of ground may be obtained in either school or community gardens. Investigate this possibility before giving up the idea.

Sun, soil, showers, luck—all these count in garden-

ing. But there is a fifth ingredient, an indispensable ingredient—you. Your intelligence, your persistence, your patience, and your care will make your garden a worthwhile and productive venture, for it will help feed your family and free some of your income for other things. The surest way for your family to have the vegetables they want and need is to raise them in your own garden. Some families may even have enough space to raise many of their own fruits, although that is not a subject we will consider here.

Every family with a garden can be sure of having an adequate supply of minerals and vitamins all summer if they make good plans. With good planning and an extra expenditure of time and energy, they can process and store a good part of the food needed for winter.

PLANNING YOUR GARDEN

Suppose you and your family are new at the business of gardening. What then? Obviously you will need advice and help. Your county agricultural agent will be able to give you much good advice. Maybe one of your neighbors is an expert gardener. Perhaps he will be willing to help you with your plans. Or you might talk over your plans with the agricultural teacher at school. Boys and girls or grown-ups who can work under the direction of such an expert are fortunate.

Do not start gardening on a larger scale than you and your family will be able to manage. The worst waste among gardeners has come from plots planted

in bursts of enthusiasm and then neglected and abandoned before harvesting. No boy or girl or grown-up who is not ready to stick on the job through harvesting should start a garden. If he does, he wastes time, seeds, and tools. Better a little gardening well done than a big enterprise first neglected and then abandoned!

Plan your garden to suit the size and needs of your family. Plant only as much as your family can take care of and no more than you will use on your table and for canning or storage. With a garden you should "eat what you can and can what you can't."

A good way to start a plan for a garden is to have your family list the vegetables they like best. The second step is to decide which of these vegetables should be planted and how much of each should be grown.

If you know something about the vitamin and mineral content of vegetables, you can plan your garden so as to ensure your family their quota of these essential nutrients. By studying Chapter 2, Food Makes a Difference, you can find which vegetables will be best to grow from the standpoint of nutritive value. Not only is this possible, but by studying the tables which follow, it is fairly easy.

With these tables you can figure out just how much of everything to plant to supply your family with fresh vegetables through the garden-growing season and vegetables in some preserved form for the rest of the year.

You can produce the following foods in the seven basic groups in your garden:

Group One: Green and yellow vegetables. One serving each day per person equals 3½ pounds per week or 182 pounds per year for each person in the family. This is your family's quota of the vegetables in Group One. Most families will buy some, grow some, and preserve some of what they eat.

Group Two: Tomatoes, cabbage, peppers. Serve one of these every day or 2½ pounds per week per person (130 pounds per year) if sole source of vitamin C. If oranges and grapefruit are used, you will not need to raise 130 pounds per person per year.

Group Three: Potatoes and other vegetables. One serving of potatoes per person per day equals 3½ pounds per week or 182 pounds per year. Two servings of other vegetables each day equals 6 pounds per week per person or 312 pounds per year.

Group Five: Dried beans, peas, Lima beans, soybeans. One serving per person three times a week equals 6 ounces per person per week or 20 pounds a year.*

Of course, these quotas per person are averages and are figured on the basis that your family consists of two adults and several children. But even so, they will show the approximate amounts of these foods your family need to be well nourished and strong. If you can, raise these foods; if you can't, you will have to buy them.

The information given above, plus that in the following table,† will enable you to plant your garden

* This information is adopted from the bulletin, *Garden for Victory*. Ohio State University, Agricultural Extension Division Bulletin No. 282.

† Adapted from *How to Make a Victory Garden*. Columbus, Ohio: Union Fork and Hoe Company, 1943. Pp. 15 (p. 11).

Vegetable	*Basic Seven Groups*	*Approximate Yield per 100 Feet of Row*
Beans, bush, Lima, pole, soy	I or V	50–60 lb.
Beans, pole	I or V	60 lb.
Beets	III	100 lb.
Cabbage, early [1]	II	100 lb.
Cabbage, late [1]	II	100–135 lb.
Carrots [2]	I	100 lb.
Chard, Swiss	I	100 lb.
Corn, sweet [2]	I or III	100 ears
Endive	I	50 lb.
Kale	I	50 lb.
Lettuce [2]	I	50 lb.
Melon, musk	III	50 fruits (2–3 lb. to a fruit)
Melon, water	III	25 fruits (4–10 lb. to a fruit)
Okra, gumbo	I	30 lb.
Onions, seed	III	75 lb.
Onion sets	III	100 lb.
Parsley	I	50 lb.
Parsnip	III	100 lb.
Peas [2]	I or V	40 lb.
Pepper plants [1]	II	(40 plants) 120 peppers, 40 lb.
Potato, Irish, sweet	III	(75 slips) 100 lb.
Pumpkin	I	100 fruits (2–8 lb.)
Rutabaga	I	150 lb.
Spinach [2]	I	50 lb.
Squash, bush	I	100 fruits
Squash, winter	I	100 fruits (2–4 lb. to a fruit)
Tomato [1]	II	(35 plants) 200 lb.
Turnip [2]	I or III	100 lb.

[1] Buy plants from local store.
[2] Make successive sowings.

in terms of your family's requirements of the basic seven.

Now suppose you belong to a family of four—father, mother, and two children. You live on a farm, and you wish to raise your entire winter's supply of vegetables. We will figure the amount of vegetables in Groups One and Two that your family will need. Then you can figure the amounts needed in Groups Three and Five for yourself.

Group One: Green and yellow vegetables (4 × 182 lb. or 728 lb.)

Beans, bush	100-ft. row or its equivalent	50 lb.
Beans, Lima	100-ft. row	50 lb.
Carrots	200-ft. row	200 lb.
Chard, Swiss	100-ft. row	100 lb.
Kale	50-ft. row	25 lb.
Lettuce	50-ft. row	25 lb.
Peas	200-ft. row	80 lb.
Rutabaga	50-ft. row	75 lb.
Spinach	100-ft. row	50 lb.
Turnips	100-ft. row	100 lb.
Total		755 lb.

Group Two: Tomatoes, cabbage, peppers (4 × 104 lb. or 416 lb.)

Cabbage, early	50-ft. row	50 lb.
Cabbage, late	100-ft. row	120 lb.
Peppers	45-ft. row	38 lb.
Tomatoes	125-ft. row	150 lb.
Total		450 lb.

The actual selection of vegetables you choose to meet your family's quota of the basic seven foods will depend, of course, upon the locality in which you live and the preferences of your family.

If you have a large plot of ground and a family with time to help, you may be able to raise the entire quantity of vegetables needed to keep your family well and strong. Or, if you have a small plot, you may plan to raise part of the amount and buy part.

If you are going to raise all the vegetables needed by your family, you will need to can, freeze, dry, or store the supply for the winter months. The next chapter, Can If You Can, will tell you how to determine the amount you will need to preserve or store for these months.

You will have better results if you plan your garden first. Even a small plot, if properly planned, fertilized, and used continuously to keep something growing throughout the season, will produce a surprising lot of fresh vegetables for your table.

In your locality it may be possible to raise a succession of crops. You can find out by consulting an experienced gardener, your county agricultural agent, or your school agriculture teacher. This is one reason why a plan is so important. If a succession of crops is possible, you can accomplish it in the following ways:

By making successive plantings every two weeks of beans, peas, beets, carrots, lettuce, and spinach until you have several crops in progress. You can make two plantings of tomatoes and cabbage, or if space is plentiful you can plant varieties that mature at different times.

By raising a crop of early vegetables and then planting a later crop of different vegetables in the same plot.

You will want to grow the vegetables that will return the most for your effort. Of course, these will vary somewhat with the part of the country in which you live. But in general, for families having only a limited garden spot, the best choices are beans, beets, carrots, cabbage, chard, onions, lettuce, spinach or other greens, and tomatoes. In small gardens certain vegetables take too much room, for example, potatoes, winter squash, corn, peas.

In most sections of the United States, tomatoes rank first among the vegetables for the home garden. They are easy to grow, are high in essential vitamin C, and produce abundant crops. Varieties suitable to almost every part of the United States have been developed. Most home gardeners find it easier to buy a dozen or so plants from a local grower than to try to raise plants from seed. Some varieties bear early, others late, so by planting both types you can have tomatoes from July to frost.

Families with larger plots may include endive, kale, parsnips, peas, peppers, squash, pumpkins, melons, and sweet corn. Herbs, too, have a place in the garden. Among the easiest to grow are parsley, chives, mint, savory, and sage.

There is no reason why every vegetable garden should not have at least one row of flowers. The spirit needs to be fed with the refreshing beauty of flowers. We can adopt the slogan, "Grow vegetables for food," and add, "And flowers for beauty."

GETTING DOWN TO EARTH

Farmers take great pains in getting their land ready for planting. It will pay you to take a tip from them. Preparation of the soil is an important part of the job of gardening. Even the best soil must be carefully prepared before planting begins.

For tools you'll need a spade or fork, hoe, rake, heavy twine for marking rows, a trowel, and possibly a dust gun or sprayer. In addition, you should have a good supply of "elbow grease."

TIPS ON GARDENING

The following hints will help make your gardening venture a success:

1. Moisture is important at planting time. If the soil is too wet to work nicely with a rake, it is advisable to wait a day or two. If the soil is too dry to germinate seed, the rows can be made a day or a few hours ahead of time and the soil in each row watered thoroughly. As soon as the soil is dry enough to handle, the seed may be sowed and covered.
2. Always firm the soil over seeds as you sow them with the head of the hoe or rake. Seeds do not germinate well in loose soil.
3. Mark all rows at both ends with labels and stakes. They will guide you in cultivating the rows the first few times.
4. Cultivation should begin as soon as seeds are up. In this way you will keep ahead of the weeds. Every weed that grows in your garden is robbing the soil of just so much plant food and moisture which ought to be going into vegetables. The

statement, "The more you hoe, the more you grow," should be taken seriously.

5. Don't let the ground get powder dry. Water it thoroughly once a week when needed. Vegetables need plenty to drink. Don't water unless the soil is really dry, but when you do, keep at the job until the ground is soaked. Vegetables never recover fully if their growth is slackened by lack of water.

6. Both weeding and thinning are best done in slightly moist soil. If your garden clamors for attention during dry weather, wet the ground thoroughly several hours before you start work.

7. When plants are several inches tall, good results can be obtained by mulching between the rows or around individual plants with peat moss, lawn clippings, chopped corn stalks, or any other loose material.

8. Pests strike when you least expect them. Therefore inspect the plants regularly and, if necessary, spray or dust them every week or ten days with materials your seed man recommends.

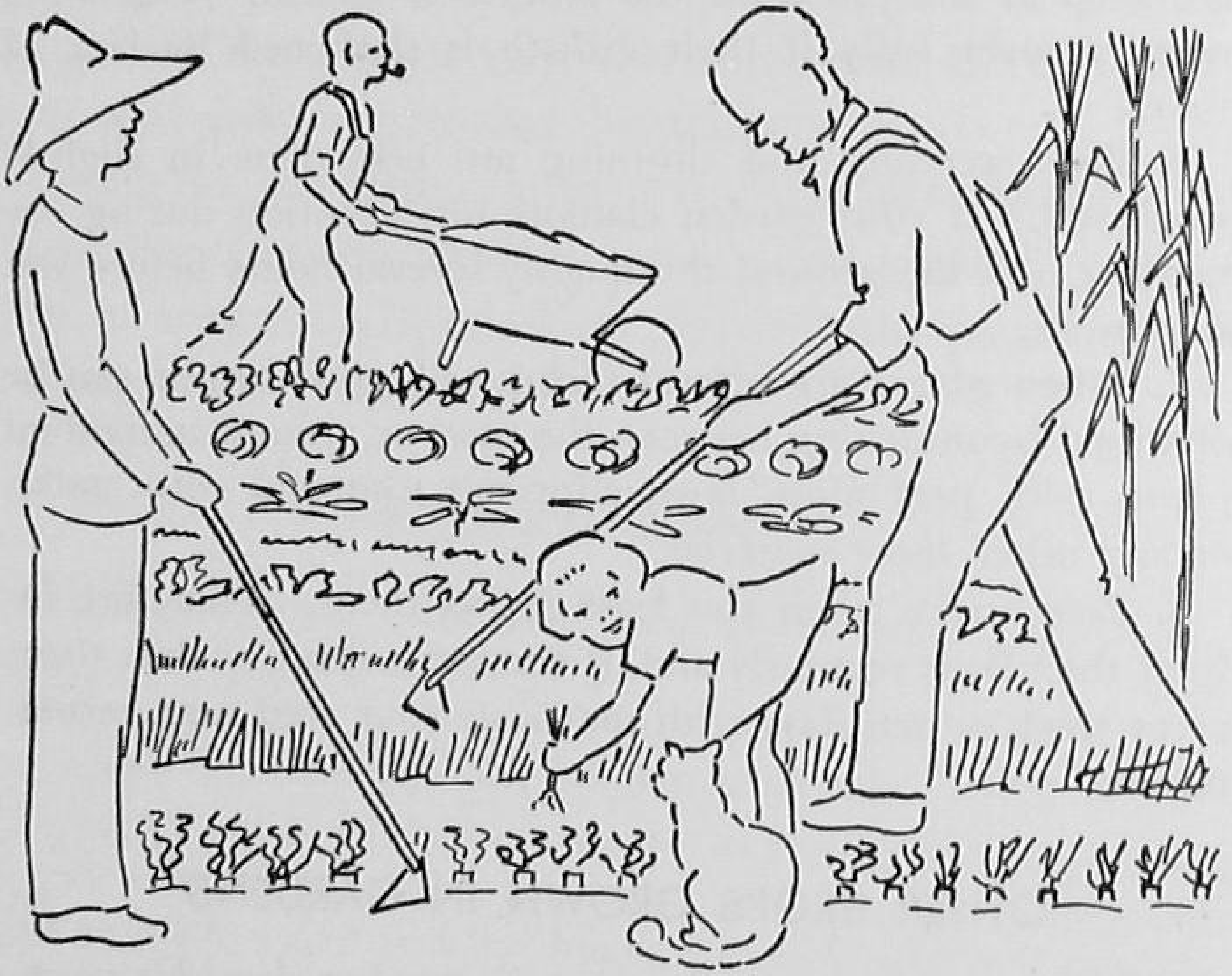
OTHER CROPS GROWN IN GARDENS

There are other crops grown in gardens besides vegetables—less tangible crops, but nonetheless important.

There is the feeling of well-being and joy that the gardener himself experiences. Growing things is an exhilarating adventure, and if you can later enjoy the fruits of your labor the task of gardening is all the more fun!

A feeling of family and community solidarity and understanding often grows in gardens, too. Gardening can be a great cooperative venture for the members

of the family and even for the community. Grandparent and grandchild may work side by side in weeding beets and carrots; father and son may have a little wholesome competition in raising the largest and best-



A cooperative venture for the family.

flavored tomatoes; mother and daughter may work as a team in getting the vegetables from garden to table quickly. The chances are that all will gain in appreciation and sympathy.

Having a good garden requires teamwork, and a family makes a good team. Families can divide the work in different ways. The Baxter family assigns each member of the family the responsibility for a cer-

tain section of the garden. The Browns assign a particular job to each member of the family—preparing the soil, planting, weeding, and watering. It doesn't really matter how the work is divided, just as long as it is divided.

We may garden alone or with our family, or we may join a cooperative enterprise, such as the school garden for school lunches. However we garden, we will gain in health, in outlook, and in understanding. These are sturdy plants, indeed!

If possible, every child should have a little garden of his own, even though it's only a few short rows of vegetables which he has chosen for himself. It's surprising how much more enthusiasm is shown for carrots a youngster has grown himself.

With planning and persistence on your and your family's part, the question, "How does your garden grow?" will be changed to another, "What's cooking?" and something *will* be cooking in your home—an early mess of green peas, sweet, delectable tomatoes, tender, crisp greens. By midsummer the lame back, wind-burned neck, blistered palms, and other evidences of pampered anatomy will be forgotten, and you'll have some mighty good eating at your house.

Some Questions to Ask Yourself

Why is making a garden a good project for a family?

How much were the salad greens you used from your garden last week worth on the market? How much would this saving amount to in a season?

How many leafy vegetables can you name? Some people begin and end their list with spinach. Although spinach is a good vegetable, there are many others that are equally rich in vitamins and minerals and that deserve a place in your garden. Do you know others? How many of them are you planning to include in your garden?

How much of everything will you need to grow to supply your family with fresh vegetables during the growing season? With vegetables in some preserved form the rest of the year?

Send a sample of the soil in your garden to your state experimental station. What, if any, essential elements does it lack? Where would you go to find out what you need to do to correct these deficiencies?

If You Want to Know More about Gardening

Those who want to know more about gardening should read three bulletins issued by the United States Department of Agriculture: *Subsistence Farm Gardens, Victory Gardens, Victory Garden: Leader's Handbook,* and one issued by the United States Office of Education, *Negro Farm Families Can Feed Themselves.*

Your state agricultural college may have bulletins which apply to your locality.

There are many good garden books, but for our purposes we shall list only two: Williams, *The Old Dirt Dobber's Garden Book,* and Guylay, *Vegetable Gardening for Everyone.*

11. CAN IF YOU CAN

For People Who Want and Need to Know How to Preserve Food

You've done a fine job with your garden. You've watered and weeded, and your vegetables are wonderful. Bumper crop is the term to apply to the yield of your plot.

But even if all this is true, you've only just started. What about next winter, when your garden is just a memory? You'll be prouder than ever if some of your produce is canned.

Canning is the preservation of fresh foods for storage over a long period of time. It is accomplished by the destruction of bacteria and molds which ordinarily cause fresh foods to spoil.

Careful preparations will need to be made for canning. And this preparation involves more than getting jars and food ready. It also means securing reliable directions for canning different types of food and brushing up on safe and correct canning techniques, which include everything from the importance of having clean hands to understanding what goes on inside a jar of food in canning. A home canner can get de-

pendable directions for processing food particularly adapted to her state from the state agricultural college or experimental station.

THE METHODS OF CANNING

There are two methods of canning in common use which are recommended. The pressure cooker method is a "must" for vegetables (except tomatoes) and meats and may be used for fruits and tomatoes. The hot-water bath may be used with safety for fruits and tomatoes, but never for anything else.

THE PRESSURE COOKER METHOD

A pressure cooker cooks food at higher temperatures than can be reached in any other way. The only sure way of destroying bacteria and other harmful elements that cause food to spoil is to use very high heat.

In a kettle or saucepan, no matter how long or how hard you cook water, it will never get any hotter than 212°F. This is because water boils at 212° at normal atmospheric pressure (sea level). At high altitudes it doesn't even get to 212°.

If you can increase the pressure, you can also increase the temperature. That is what a pressure cooker does. Five pounds of added pressure increases the temperature of boiling water to 228°. Ten pounds of pressure raises it to 240°, and so on. To process corn, peas, beans, and other common vegetables safely takes heat of at least 240°.

Only a pressure cooker will raise the temperature this high. Oven canning is not effective, even though the temperature in the oven is very high. The food itself rarely reaches a heat sufficient to kill bacteria. Because adequate temperature control is impossible, oven canning is risky.

The hot-pack method—heating the food to boiling and pouring it boiling hot into hot jars for immediate processing—is recommended.

HOT-WATER BATH METHOD

The hot-water bath method requires the use of a large kettle with a wire rack and a tightly fitting lid or a simple home-made affair such as a wash boiler with a rack of flat thin strips of wood in the bottom. The container used has to be large and deep enough to permit a goodly number of jars or cans to be placed inside and still keep a circulation of boiling water around and over them. This method is satisfactory for acid foods—all fruits and tomatoes. They may be processed satisfactorily in water at the boiling point.

EQUIPMENT FOR CANNING

The only essential equipment for canning includes:

1. A pressure cooker (if you are canning vegetables or meat).
2. A large container with a tightly fitting cover (for fruits and tomatoes).
3. Glass jars designed for canning purposes so that the top will form a seal with the jar. Tin cans are widely used in

community canning centers or in homes where a sealer is owned.

4. Rubber rings (if glass jars are used) to fit between the top and the jar to create a perfect seal.
5. Measuring cup or scales if food is measured by weight.
6. Wire rack for holding jars in pressure cooker or rack for container used in hot-water bath method.
7. Knives.

Additional equipment which makes the task easier includes:

1. A stiff brush for cleaning food.
2. A wide-mouthed funnel for filling jars with food.
3. A jar lifter.

STEPS IN CANNING

The canning process itself is very simple and should go off speedily, especially if the work is planned well and done cooperatively. The speedier the operation is carried out, the more food value is conserved.

Step One: Have canning equipment ready.

All canning equipment should be clean and in first-class order before canning is undertaken. Wash the jars and tops in hot soapy water and rinse. Place them in a pan of warm water with a rack or cloth in the bottom to prevent bumping. Bring them to the boiling point and keep them hot until they are needed. Jars and tops for open-kettle canning should be sterilized by boiling for 15 or 20 minutes. When jars are packed with food and then processed, they do not need to be sterilized first.

Step Two: Prepare food.

Only fresh, sound fruits or vegetables in excellent condition should be selected for canning. Can vegetables as soon as possible after they are gathered. "Two hours from the garden to the jar" is a good rule to follow. By so doing, deterioration of the food and its vitamin content is safeguarded against.

Scrub all food well. Prepare all vegetables as for cooking, and peel fruits and tomatoes. Wash small lots at a time and don't let them soak. To keep apples, peaches, and pears from turning dark after paring, dip them in a solution of 2 tablespoonfuls of salt and 2 tablespoonfuls of vinegar in 1 gallon of water.

Step Three: Precook food.

This procedure is used in the home canning of all vegetables and meats and a few fruits. It means merely that the food is cooked for a very short time before placing it in cans or jars. The length of time to precook depends upon the food. (See the table on p. 248.)

Most fruits are packed in a syrup of desired consistency. Choose the syrup according to taste and type of fruit canned:

Syrup	*Sugar*	*Water*	*Kind of Fruit*
Thin	⅓ cup	1 cup	Sweet
Medium	½ cup	1 cup	Medium
Heavy	1½ cups	1 cup	Sour

Heat the water and sugar together and stir constantly until the sugar is dissolved. Bring the mixture to the boiling point and use it at once. If you cook it longer, it becomes thicker.

Step Four: Pack food in jars.

Step lively about this jar-packing business. After precooking, pack food briskly into jars while it is hot and cover it with the boiling liquid—in the case of fruit, syrup or juice; in the case of vegetables, the water in which they were cooked. Don't pack too loosely; you'll have too much waste space at the top of the jar after the processing is complete. But, at the same time, don't pack so tightly that it is difficult for the heat to penetrate to the center of the jar.

Air spaces are a menace. Get rid of them by running a knife down the side of the jar.

To each quart of vegetables, add one teaspoonful of salt and other seasoning if desired.

If you are canning meat, you will need to look up specific directions for doing so because there are some variations from this general process.

Step Five: Partly seal the jars.

Take the rubber rings out of hot water and place them on the jars. Screw each cover on so that it is almost tight. Covers which are put in place with two wire clamps should have just one clamp in place. Covers made with an automatic seal should be screwed on tightly.

When tin cans are used either at home or in a community cannery, fill hot cans with hot food and boiling liquid and seal. The steam in the hot can drives out (exhausts) the air from the can so that there will be no expansion of air which would blow off the lid. If for any reason the contents of the can get cold before

the can is sealed, it is necessary to set the can in a pan of boiling water or in an exhaust vat until it reaches the desired temperature as tested with a thermometer. (Community canneries display charts giving the right temperature for specific foods. In community canneries where exhaust vats are provided it is safe to use a cold-pack method.) In other words, cans must be hot when sealed.

Step Six: Process the jars or cans.

Pressure cookers are fun to use. Be certain that your cooker is in good condition and follow to the letter the instructions that come with it. If you are canning vegetables or meat, put one or two cups of hot water in the cooker, depending on its size. Place the filled jars or cans on the rack inside. Put on the cover and adjust its clamps or turn the lid so that it is sealed. Leave the petcock open and let steam escape through it for five or six minutes; then close the petcock. (Be sure that your pressure gauge is accurate. Have it tested at your state agricultural college or other center set up for such purpose; your home economics teacher, home demonstration agent, or nutrition committee chairman can tell you where to have this done.) Watch the gauge, and when the recommended pressure is reached turn the heat lower. Adjust the heat from time to time if necessary to be certain that the proper pressure is constantly maintained. Count the processing time from the moment the correct pressure is reached, not before.

If you are canning fruits or tomatoes, you may be using a kettle or boiler with a tight cover instead of a pressure cooker. Put a large amount of water in the boiler (enough to cover the jars two inches after they are placed inside) and boil. Place the jars on the rack so that the water can circulate around them, cover, and bring again to a boil. Count the time from the moment that the water is at a full, rolling boil, not before. Keep the water boiling for as long as the table says is necessary for the particular food you are processing.

Step Seven: Remove jars from cooker.

If the jars are in the pressure cooker, let the pressure slowly fall to zero after removing from heat. Slowly open the petcock, remove the cover, and carefully lift out the rack with the jars. If they are in a kettle or boiler, simply turn off the heat, remove the cover, and lift out the rack with the jars. Line up all jars for the completion of seal and cooling.

If tin cans are used, plunge into cold water immediately after removing from cooker to check further cooking.

Step Eight: Complete seal on jars and store.

Turn the lid very tight if it is the screw type. Place the second metal clamp in place if it is the two-clamp type. Jars with composition rubber seals in the lid (which you screwed tightly before putting into the cooker or bath) have automatically sealed, and nothing further need be done to them.

Place jars right side up to cool. Carefully tilt cooled jars to see whether they leak. If they do, remove the

contents and process again. Wipe jars clean and label with the contents and the date. Canned foods keep best where it is cool, dark, and dry.

HOW TO SPOT SPOILAGE

The bacteria causing botulism are culprits you can't taste or smell or see. But, if present, they're deadly. Your best defense? Use a pressure cooker and follow the time and temperature chart to the letter when you can nonacid vegetables and meats. When opening a jar, always boil the contents fifteen minutes before tasting.

You can spot other types of spoilage if you:

1. Inspect for bulging cap or broken seal and signs of spoilage within.
2. Watch for cloudiness of liquid, sediment, off-color, patches of growth. Look for bubbles which indicate gas formation.
3. If you've used zinc caps, pull lipped rubber quickly from beneath cap with pliers. A sharp sound indicates in-rushing air and a perfect seal. Spurting, gurgling, or no sound may mean a poor seal or spoilage.
4. Smell contents the instant the cap is removed and again as the first steam comes from the boiling food. Any unusual odor is indicative of spoilage.

Be sure to boil all home-canned meats and nonacid vegetables fifteen minutes before tasting. If you even *suspect* the presence of spoilage, destroy the contents and lid by burning and scrub and sterilize the jar.

Do these directions scare you to death? Don't let them. Home canning has been going on for years and

for the most part successfully. Just follow the rules and yours will be good keeping and eating.

CANNING TABLES *

BOILING-WATER BATH

If you live 1,000 feet or more above sea level, you have to process your food in a boiling-water bath for a longer period. For each 1,000 feet above sea level add 1 minute to the processing time if the time called for is 20 minutes or less. If the processing requires more than 20 minutes, add 2 minutes for each 1,000 feet. Processing times are for hot-packed food, as near boiling as possible when processing starts.

Kind of Food (Fruits and Tomatoes)	*How to Prepare*	*Time (in Minutes) to Process in Boiling-Water Bath at 212°F.* (*Pints*)	(*Quarts*)
Apples	Pare, core, cut into pieces. To keep from darkening, dip in water containing 2 tablespoons of salt and 2 of vinegar per gallon. Steam or boil in thin syrup or water 5 minutes. Pack hot; cover with hot liquid.	15	15
	Or make *applesauce*, sweetened or unsweetened. Pack hot.	10	10

* Adapted from the folder *Home Canning of Fruits and Vegetables: Seven Points for Success.* United States Department of Agriculture, Bureau of Human Nutrition and Home Economics. Washington, D. C.: Government Printing Office, 1944.

Kind of Food (Fruits and Tomatoes)	*How to Prepare*	*Time (in Minutes) to Process in Boiling-Water Bath at 212°F.* (*Pints*)	(*Quarts*)
Apricots	Same as peaches.		
Beets, pickled	Cook beets until tender in water to cover. Remove skins; slice or dice. Pack hot; add ½ teaspoon of salt to each pint. Cover with boiling vinegar sweetened to taste.	30	30
Berries (except strawberries)	If berries are firm, precook, adding just enough medium syrup or juice to prevent sticking to pan. Pack hot; cover with hot liquid.	15	15
	If berries are soft, fill jars with raw fruit; cover with boiling syrup or juice.	20	20
Cherries	Can cherries with or without pits. Follow directions for berries. For sour cherries use medium syrup; for sweet cherries use thin syrup.	15	15
Peaches	Remove skins and pits. Precook juicy fruit slowly until tender, adding ¼ cup of sugar to 1 pound of fruit to draw out juice. Precook less juicy fruit in thin to medium syrup. Pack hot; cover with boiling juice or syrup.	20	20

Kind of Food (Fruits and Tomatoes)	*How to Prepare*	*Time (in Minutes) to Process in Boiling-Water Bath at 212°F.* (*Pints*)	(*Quarts*)
Pears	Peel, cut in halves, core. Otherwise same as peaches.		
Plums, prunes	Put up plums whole or in halves. Prick skin of each whole plum. Precook 3 to 5 minutes in juice or thin to medium syrup to sweeten. Pack hot; cover with boiling juice or syrup.	15	15
Rhubarb	Cut into ½-inch lengths. Add ½ cup of sugar to each quart of rhubarb and let stand to draw out juice. Boil until tender. Pack hot; cover with hot juice.	10	10
Sauerkraut	Heat well-fermented sauerkraut to simmering; do not boil. Pack into jars; cover with hot sauerkraut juice. Leave ¼-inch head space.	25	30
Strawberries	Stem berries and add ½ cup of sugar to each quart of fruit. Bring slowly to boil. Remove from stove and let stand overnight. Bring quickly to boil. Pack hot; cover with hot juice.	15	15
Tomatoes	Scald and peel; remove stem end and bad spots. Quar-	10	10

Kind of Food (Fruits and Tomatoes)	*How to Prepare*	*Time (in Minutes) to Process in Boiling-Water Bath at 212°F.* (*Pints*)	(*Quarts*)
	ter or leave whole. Heat to boiling. Pack hot and add 1 teaspoon of salt to each quart.		
Tomato juice	Remove stems and all green and bad spots. Cut into pieces. Simmer until softened. Put through a fine sieve. Add 1 teaspoon of salt to each quart. Reheat at once just to boiling. Fill into hot jars immediately. Leave ¼-inch head space.	15	15
Fruit juices	*Berries, red cherries, currants, grapes, plums, or blends of these.* Remove any pits; crush the fruit. Heat gently to 170°F. (below simmering) until soft. Strain through a cloth bag. Add sugar if desired—about ½ to 1 cup of sugar to 1 gallon of juice. Heat to 170°F. again; fill into hot jars or bottles. Leave ⅛-inch head space.	5	5
Fruit purées	Use any soft fruit. Put the cooked fruit through a fine sieve. Proceed as for fruit juices.	20	20

PRESSURE CANNER

If you live at 2,000 feet or more above sea level, you have to process your food with higher pressures than 10 pounds. For each 2,000 feet above sea level add 1 pound of pressure. Process the food for the length of time given in the table. Processing times in the table are for hot-packed food—as nearly boiling as possible when processing starts.

Kind of Food (Vegetables)	*How to Prepare*	*Time (in Minutes) to Process in Pressure Canner at 10 Pounds (240°F.)* (*Pints*)	(*Quarts*)
Asparagus	Cut into 1-inch lengths. Cover with boiling water; boil 2 or 3 minutes. Pack hot; cover with hot cooking liquid.	35	40
Beans	*Fresh Lima.* Can only young, tender beans. Cover with boiling water; bring to boil. Pack hot; cover with hot cooking liquid.	45	55
	Snap. Cut into pieces. Cover with boiling water and boil 5 minutes. Pack hot; cover with hot cooking liquid.	30	40
	Green soybeans. Cover shelled beans with boiling water and boil 3 or 4 minutes. Pack hot; cover with fresh boiling water.	60	70
Beets	Before washing, trim off tops, leaving taproot and 1 inch	40	45

Kind of Food (Vegetables)	*How to Prepare*	*Time (in Minutes) to Process in Pressure Canner at 10 Pounds (240°F.) (Pints)*	*(Quarts)*
	of stem. Boil until skins slip easily—baby beets take about 15 minutes; older beets longer. Skin and trim. Slice older beets. Pack hot; cover with fresh boiling water. *Pickled beets.* See fruit and tomato canning table.		
Carrots	Slice and boil 5 minutes in water to cover. Pack hot; cover with hot cooking liquid.	40	45
Corn	Whole-grain. Cut corn from cob so as to get most of the kernel but not the husk. Add 1 teaspoon of salt to each quart of corn and half as much boiling water as corn. Heat to boiling and pack hot. Add no more salt and no extra water.	65	75
Greens	Discard imperfect leaves and tough stems; wash out all dirt. Boil in small amount of water until wilted. Pack hot and not too solid. Cover with hot cooking liquid.	95	105
Okra	Can only tender pods. Cover with boiling water and bring back to boil. Pack	35	40

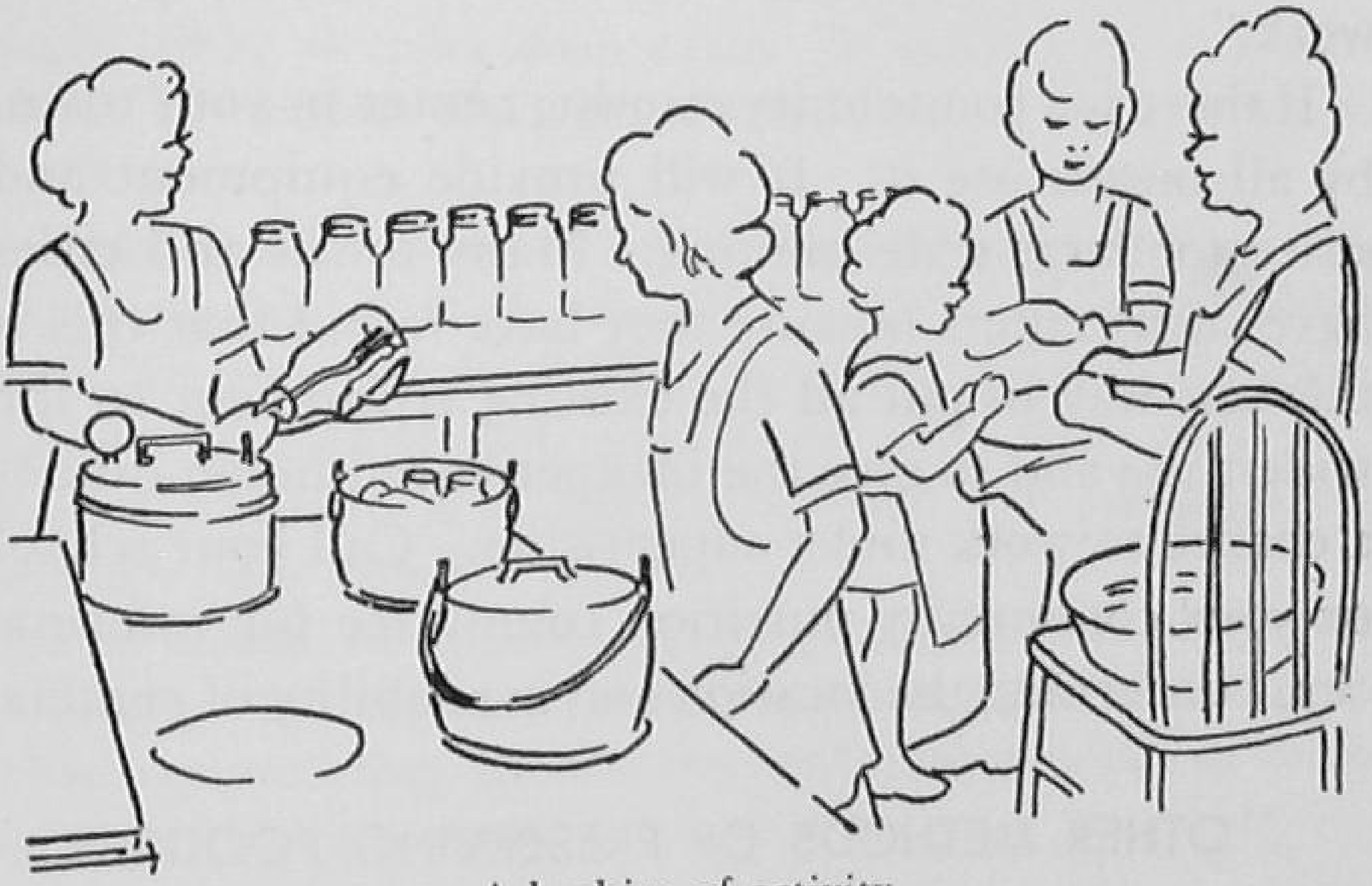
Kind of Food (Vegetables)	How to Prepare	Time (in Minutes) to Process in Pressure Canner at 10 Pounds (240° F.) (Pints)	(Quarts)
	hot; cover with hot cooking liquid.		
Peas	*Green.* Cover with boiling water; boil about 5 minutes. Pack hot; cover with hot cooking liquid.	45	
	Black-eyed. Same as Lima beans.		
Pumpkin	Peel and cut into 1-inch cubes. Add a little water and bring to boil. Pack hot; cover with hot cooking liquid.	85	105
Squash	*Summer.* Do not peel. Otherwise same as pumpkin.		
	Winter. Same as pumpkin.		
Sweet potatoes	Boil or steam until skin slips easily. Skin; cut into pieces. Pack hot; cover with boiling water.	100	110

WORKING TOGETHER ON A PUT-UP JOB

How about you and some of your neighbors canning together? You will mix economy with fun. If you have no pressure cooker, team up with someone who has. If you both have one, you can work faster together using two or more pressure cookers.

Mrs. Busby's kitchen was the scene of great activity the day she and two of her neighbors started canning.

Dorothy Busby, Jane Olsen, and Mrs. Olsen shelled peas. Mrs. Busby got the cookers ready, and Mrs. Doran scalded all the jars. Then they organized the kitchen on an assembly line basis. The peas were shelled and cleaned at a table in one corner of the



A beehive of activity.

kitchen by Mrs. Olsen and the two children, Mrs. Busby precooked them, and Mrs. Doran packed them hot into the jars and put them into and took them out of the pressure cookers.

It was really exciting. Young Mrs. Doran was the only one who had never done any canning before, but she found that it was a lot of fun working this way with the neighbors. She learned a lot, too.

Mrs. Busby explained, "It all started about a month ago at our church social when we got to talking about

canning. Before we knew it, almost, the three of us had made plans to can together just as soon as the first peas in our gardens were ready. And it certainly was profitable. By the time the afternoon was over, we'd canned three bushels of peas, and each of us carried home fourteen pint jars. Not bad for one afternoon's work."

If there is a community canning center in your town, by all means use it. It will provide equipment and space for large-scale canning. Many towns and cities have such centers because they have found that this is the best way to put all the existing equipment to the widest use and to give the inexperienced home canner a chance to work under supervision. Call your school or your community nutrition committee for information concerning the location and availability of centers.

OTHER METHODS OF PRESERVING FOODS

FREEZING

The preservation of food by freezing is not a recent development, but the adaptation of the method to home needs and the application of freezing to various kinds of foodstuffs over long periods of time are relatively new. The acceptance of freezing foods for home use has developed hand in hand with the rapid expansion of freezer locker plants. Food preservation by freezing has met with widespread welcome, because foods preserved in this manner resemble fresh foods very closely in appearance, taste, and food value.

Actually, freezing food is the simplest method of preserving it. One woman describes the method she uses as follows:

> I prepare the food as I would for immediate cooking; instead of going into the cooker it goes into cartons to be hustled into the quick freezer. Fruits and berries are sprinkled with sugar before we pack them away. By this process it is only about 20 minutes from garden, orchard, or berry patch to quick freezer.
>
> Though this simple method is highly unorthodox, according to the books (which warn that vegetables must be scalded first), the proof of the freezing is in the eating. The vegetables thus packed taste much better than those that were scalded. Months after freezing they are quite as palatable as when fresh from the garden.
>
> The reason for steaming is to guard against decay and botulism. Our vegetables reach the freezing unit quickly, and when removed they go into the kettle frozen solid, so there isn't any chance of spoilage.*

This field is developing so rapidly that you will need the latest and best information available if you are to go in for "freezing." Up-to-date information may be obtained from the United States Department of Agriculture or your own state agricultural college or experimental station.

The advisability of using a freezing locker will depend on its location in relation to where you live and the transportation which you have available.

* Katherine Ames Taylor: "Now That We Have the Freezing Outfit." (Condensed from the *Christian Science Monitor,* Weekly Magazine Section, October 16, 1943), *Reader's Digest,* November, 1943, pp. 8-9.

VEGETABLE STORAGE

Storing vegetables is both cheaper and easier than canning if they are to be eaten during their natural storage period, although the quality of some vegetables is better if they are canned. Special late plantings should be made of vegetables designed for winter storage. Only sound, high-quality vegetables are worth storing.

Beets, carrots, cabbage, parsnips, potatoes, rutabagas, and turnips may be stored in a cool, well-drained, frost-proof cellar that has a moist atmosphere. Moisture keeps these crops from shriveling.

Celery and endive should be dug with a little soil attached to their roots and set in a cool, well-ventilated shed or shelter. The soil should be watered lightly from time to time, but the leaves and stalks kept dry.

Onions require a cool, dry place for storage. Sometimes the attic is used.

Sweet potatoes (after they have been properly cured *), pumpkins, and squashes keep in a warm, dry place, such as a shelf near the furnace. Plenty of ventilation is needed.

Small quantities of vegetables can be stored outdoors. A good way is to sink a box or barrel to about half its depth in the ground. Put the vegetables in and place on top of them a mattresslike cover made of burlap bags stuffed with straw. Cover with a six-inch layer of

* Get directions from your agricultural teacher or agricultural experiment station.

clean straw or leaves, then top with dirt to hold in place.

DRYING

Another way to keep vegetables through the winter is to dry them. You can't dry everything, but here is a list of vegetables that dry well: sweet corn, mature beans and peas, beets, green peas, snap beans, pumpkin, and squash.

Fruits are easier to dry than most vegetables. Apples, apricots, figs, peaches, and pears are the ones most commonly dried at home. Other fruits that may be satisfactorily dried are blackberries, black raspberries, red raspberries, cherries, plums, and prunes.

Only fresh, ripe, sound, clean foods should be dried. To prevent discoloration when you pare food, use stainless-steel knives. When you cut food, make thin, even slices or uniform pieces. As soon as fruits and vegetables are cut open, certain changes in color, food value, and flavor begin to take place. To retard these changes, foods are given special treatment—dipped in an acid or salt solution, sulfured, or precooked in steam or boiling water. Be sure to secure specific directions if you are going to attempt drying.

In regions with clear, practically rainless periods, several kinds of fruit and a few kinds of vegetables may be sun-dried on an outdoor shelf, a roof sloping toward the south, or racks in sunny windows. Good fruits for sun-drying are apples, apricots, blackberries, raspberries, cherries, peaches, and plums. The most satis-

factory vegetable for sun-drying is early-maturing sweet corn. Drying food should be covered with cheesecloth or mosquito netting.

Fruits and vegetables may be successfully dried in the oven of your gas or electric range. Most food which can be dried in the sun or in a home drier can be dried in an oven.

Oven-drying is small-scale drying. The average oven can take from 4 to 8 pounds at one drying load. You can either buy trays or make them. Without a good thermometer it is almost impossible to control temperature in oven-drying.

Foods are prepared for oven-drying in the same way as for sun-drying. Set one oven rack about 3 inches from the oven floor and the other rack, if you have two, just far enough above for the trays to be stacked between.

If there is a regulator, set it as low as is possible for your oven. If the oven has no regulator, turn the flame very low. Don't turn on the top unit in an electric oven. If necessary, remove it.

Spread food evenly, 1 to 2 pounds on a tray. A lighter load dries faster. Stack two loaded trays together, using a wooden block at each corner so that air can circulate between.

Put the thermometer on the top tray. The temperature should remain about 150°F. Prop the oven door open while drying—the door of an electric stove, ½ inch; of a gas stove, 8 inches.

Every hour or two, trays should be reversed. Most vegetables take 4 to 12 hours to dry; fruit, 6 hours or longer.

Dehydrators can be either made or bought. Your state agricultural college or experiment station may be able to send you directions for making one.

As far as conserving food values is concerned, little is known about the best methods of drying.

Dried fruits and vegetables will keep for a year or longer if sealed in moisture-proof containers and stored in a cool, dark, dry place. Practical containers include glass jars, tin cans, tin boxes with tight-fitting lids, and stone crocks with covers that can be sealed.

If you have glass jars but no rubber rings, the jars can be sealed with a strip of muslin dipped in hot paraffin and placed over the opening. Screw-top jars may be sealed with used rubber rings that have not become hard and brittle. Simply use two rings instead of one, and screw the top down very tightly.

Fill containers as full as possible. Because dry foods are best if used a short time after opening, it is wise to store them in small amounts in small containers.

Examine dried food occasionally. If there is any sign of moisture, reheat to 165°F. and reseal.

HOW MUCH TO CAN, FREEZE, STORE, OR DRY

There are several facts which you will need to know before you can decide how much to can, freeze, store, or dry.

One thing you will need to know is the quantity of canned fruits or vegetables you can expect to get from a particular quantity of fresh fruits or vegetables. The table below will help you to estimate the amount of fresh fruits or vegetables you will need to secure a given yield of canned goods:

Fruit or Vegetable	*Quantity of Fresh Product*	*Quantity Canned*
Apples	1 bu. (50 lb.)	17–20 qt.
Beans, Lima	1 bu. (28 lb.)	6–8 qt.
Beans, snap	1 bu. (24 lb.)	16–20 qt.
Beets	1 bu. (60 lb.)	22–24 qt.
Berries	24-qt. crate	15–24 qt.
Carrots	1 bu. (50 lb.)	20–22 qt.
Cherries	1 bu. (56 lb.)	20–25 qt.
Corn	1 bu. (72 lb.)	8–9 qt. (whole kernel)
Grapes	1 bu. (48 lb.)	16–20 qt.
Greens (chard, kale, spinach, turnip greens)	1 bu. (12 lb.)	5–7 qt.
Peaches	1 bu. (50 lb.)	18–20 qt.
Pears	1 bu. (58 lb.)	20–24 qt.
Peas	1 bu. (32 lb.)	12–16 pt.
Plums	1 bu. (56 lb.)	24–30 qt.
Squash	1 bu. (40 lb.)	16–20 qt.
Strawberries	24-qt. crate	10–15 qt.
Sweet potatoes	1 bu. (52 lb.)	16–20 qt.
Tomatoes	1 bu. (56 lb.)	15–20 qt.

If you are using your garden as a source of vegetables for canning, you will have considered the needs of your family in planting it. You will have planned your garden so that you not only have enough vegetables to supply your family during the growing season, but enough to can or preserve in some form so as to meet all or part of its requirements for the rest of the year.

Then you will need to know how much of the various vegetables your family will need during the year. Do you remember the tabulation in Chapter 10, How Does Your Garden Grow?, which showed you just how much of everything to grow to supply your family with its quota of the various groups of vegetables? Now you will need to use this information again to determine the amounts you will need to preserve to have vegetables for your family throughout the year. Your selection of vegetables within the various groups for preserving or storing will be determined by what can be raised in your locality and what your family likes.

The amount you can, dry, freeze, or store depends upon the length of the growing season in your community. A simple equation will enable you to arrive at the amount to be preserved by whatever method or combination of methods you decide upon. Here it is:

$$\begin{pmatrix}\text{Total amount to}\\ \text{be eaten during}\\ \text{the year}\end{pmatrix} \text{ minus } \begin{pmatrix}\text{Total amount to}\\ \text{be eaten during}\\ \text{growing season}\end{pmatrix} \text{ equals } \begin{pmatrix}\text{Total amount}\\ \text{to be preserved}\\ \text{or stored}\end{pmatrix}$$

Of course, the amount to be preserved or stored will also depend upon the percentage of your family's need for vegetables which you expect to supply in this way. And no one can tell you the method of preserving you should use—canning, freezing, or drying. Your decision will depend upon your resources.

Although no one can tell you the exact amount you should preserve and store for your family, it may help you to know something about what other families have

done. The farm families who used this scheme lived in the Middle West and had a growing season of four months. This is how they worked out their "canning budget."

Group One: Green and yellow vegetables.

Amount needed for the entire year—182 pounds per person.

Amount used during growing season—60 pounds per person.

Amount canned—25 quarts per person (50 to 75 pounds), depending on what vegetables were selected.

Amount stored or dried—50 pounds per person.

Total available for winter months—95 to 120 pounds per person.

Group Two: Tomatoes, cabbage.

Amount needed for the entire year—130 pounds per person.

Amount used during growing season—32 pounds per person.

Amount canned—25 quarts (60 pounds) of tomatoes or juice; 15 pounds of cabbage stored or krauted.

Total available for winter months—72 pounds per person. Since this is a minimum, it might well be supplemented with citrus fruits.

Group Three: Potatoes, other vegetables, and fruits.

Amount of potatoes needed for the entire year—182 pounds per person.

Amount used during growing season—48 pounds per person.

Amount stored for winter months—140 pounds per person.

Amount of other vegetables needed for the entire year—156 pounds per person.

Amount used during the growing season—48 pounds.

Amount canned–25 quarts (60 pounds); stored–45 pounds.

Amount of fruits needed during the entire year–156 pounds.

Amount used during growing season–48 pounds.

Amount canned–25 quarts (50 pounds); dried or stored–45 pounds per person.

Group Five: Dried peas, beans, Lima beans, soybeans.

Amount needed per person entire year–20 pounds.

Amount used–6 pounds.

Amount stored–14 pounds.

These amounts are only suggestive. Your family is a specific case requiring a specific answer. So go back to the formula and work out for yourself your family needs.

Whether you can, freeze, dry, or store the produce from your garden, you'll get real satisfaction, because there is nothing like a good supply of food to give you a feeling of self-sufficiency.

Some Questions to Ask Yourself

Why is it bad practice to gather peas, beans, and greens in the heat of the day and then let them stand until the next day before canning?

How many quarts of tomatoes should your family preserve or store for the winter months? Show how you arrived at your estimate.

How many quarts of beans, peas, and corn should your family preserve or store? Give the basis for your estimate.

In hot-water bath canning where should the water level in the canner come in relation to the tops of the cans? Why?

How may spoilage be detected? What should be done as protection against spoilage?

Find out how high above sea level your community is. Modify the canning tables on pp. 244–250 accordingly. Check your results against recommendations of your experiment station if it has a table for your locality.

If You Want to Know More about Preserving Food

If you want to know more about canning, see the United States Department of Agriculture folder, *Home Canning of Fruits and Vegetables: Seven Points for Success,* and Robbins, *Canning and Drying Vegetables and Fruits.*

If you want to know more about drying, read the United States Department of Agriculture bulletins, *Drying Foods for Victory Meals* and *Oven Drying.*

If you want to know how to store fruits and vegetables, see the United States Department of Agriculture bulletin, *Home Storage of Vegetables,* and the United States Office of Education leaflet, *Negro Farm Families Can Feed Themselves.* Complete references will be found under Some Good References, pp. 311–316.

Your state agricultural college may have canning information adapted to your locality.

12. SAY IT ISN'T SO

To Keep You from Being Gullible

Do you now believe, or have you ever believed, any of the following statements:

Spinach makes you strong.
Milk and cherries should not be eaten together.
Thunderstorms turn milk sour.
Water should not be drunk at meals.
Fish is a brain food.
Celery will give you nerves of steel.
Carrots will keep your skin clear and glowing.
Bread crusts will make your hair curly.
Milk and sea food should never be eaten together.
Food should not be allowed to stand in tin cans.
Food should never be cooked in aluminum pans.
Bananas are hard to digest.
Oysters should be eaten only in certain months of the year.

None of these have any basis in fact, and, if you believe any of them, you simply believe something that isn't true.

WHY THESE ARE NOT TRUE

Let's examine some of these notions in detail and see whether we can discover some of the reasons *why*

they are not true or *why* people have believed them.

Aided and abetted by Popeye of the comic strip, many people apparently believe, or at least teach their rebellious little boys to believe, that the more spinach you eat the stronger you will be. Spinach is a good vegetable and delicious, but the era of "spinach right or wrong" is no longer with us. Now we know that spinach is no better and no worse than any other green. If you like spinach, you may eat it cheerfully, but if you don't you no longer need to hang your head in nutritional disgrace.

The notion that milk and cherries should not be eaten together is a myth of long standing, probably growing out of the fact that acid curdles milk. When you remember that all milk is curdled in the process of digestion, you realize just how absurd this belief really is.

Thunderstorms in and of themselves do not turn milk sour. The warm, damp atmosphere which accompanies such storms, however, may increase the rate of bacterial growth and cause milk to sour more quickly than it otherwise would.

Even the old stand-by, water, has been the basis of a food myth—that you should not drink water with your meals. Water is needed by the body for its vital processes, and most of us err by not drinking enough of it at meals or other times. You may and should drink water at meals, although it isn't a good idea to wash down your food with it, not because of the water,

but because you do not chew your food enough in such cases.

The belief that certain foods are used by a particular part of the body has no basis in fact. The body is a unit and functions as such. Fish is not a brain food. Celery will not give you good nerves. Carrots will not insure a good complexion. Bread crusts will never make your hair curly. For a strong, healthy body you need some food from each of the basic seven every day.

Some people grow pale at the thought of eating milk and fish together, although most of us, if we stop to think about it, have eaten the combination many times without ill effect. Have you ever eaten oyster stew, clam chowder, or creamed salmon? You lived to tell the tale, didn't you?

Food left in tin cans is reputed to become poisonous quickly. This is not true. Actually, in most cases such food will retain its purity longer if left in the can. When you hastily dump left-over peaches or string beans into a dish, you are taking them from a container that has been sterilized by the best scientific methods known and putting them into an average home-washed dish which is probably far from being germ free.

Some people are afraid of poisonous substances being formed in foods which are cooked in aluminum pans. There is no foundation for such fears. It is almost impossible to secure an aluminum-free diet, and a trace of aluminum is a normal part of the body.

For years bananas had the reputation of being hard to digest, despite the fact that monkeys of all ages thrived upon them. Now, well-ripened bananas are recommended for babies and children suffering from digestive troubles.

An old myth states that oysters should be eaten only during months with the letter *r* in the name. The truth is that they can be eaten at any time. Today's sanitary inspection and refrigeration make oysters year-around favorites.

Food fallacies such as these spring up quickly, get a strangle hold on the public, and die only after years of persistent struggle against them.

Fortunately, dozens of food fallacies have died a well-deserved death. Tomatoes were widely used among the American Indians, but the early white settlers, seeing that the plant belonged to the nightshade family, concluded that the fruit was poisonous. The plants were cultivated merely for their ornamental value or as curiosities. Children were warned of the agonizing death awaiting the hapless person who took so much as a single bite of the so-called "love apple." It wasn't until about 1850 that tomatoes were finally recognized as edible. Now most of us appreciate their fine, health-giving qualities.

For many years the potato was regarded as a curiosity. Then, during a widespread famine, people discovered that it was good to eat. These are examples of food

fallacies that have been exploded, but there are still many others that people cling to.

FOOD FADS ARE FOUNDATIONLESS, TOO

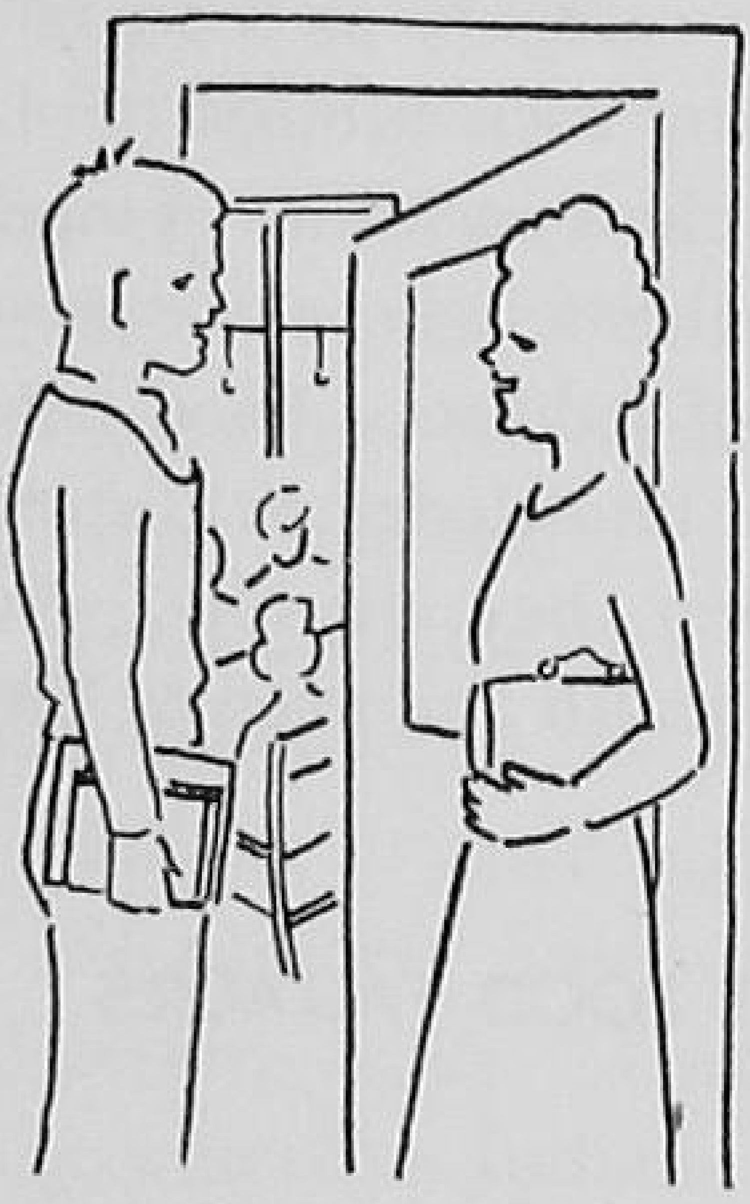
Food fads belong in the same category as food fallacies. Very few of them have any basis in fact! Followers of Fletcherism, who must chew each bite of food fifty times, and the raw food cultists, who eat everything raw, are typical examples of faddists. Food fads are usually based on incomplete knowledge or distortions of nutritional facts. At best they are silly. At worst they may be dangerous to health and even to life itself.

WHAT CAN YOU DO ABOUT FOOD FALLACIES AND FADS?

What can you do to combat such falsities or half-truths about food? The best way to counteract a falsehood is with a truth. If anyone describes the merits of any faddish system of eating or the dangers involved in eating any particular combinations of food, ask him for the *scientific evidence* for what he says. In most cases there is none.

However, if the person does defend his beliefs on some scientific ground, then verify his statements. Go to your doctor, to your home economics teacher, to the local nutrition committee. Or you may wish to go to your library and delve into the subject yourself. See the list of good references at the end of this book.

Find out the truth of the matter. If a belief is untrue, say it isn't so. Tell everyone. Counteract this insidious propaganda with truth. Food fallacies and fads may be dangerous to the health of the people in



Questioning an authority.

Searching for the truth.

your community. Stamp them out with truths and scientific facts.

Food fallacies have no place in the life of a normally healthy person. The science of nutrition is still the best guide to eating.

Some Questions to Ask Yourself

What food fallacies other than those discussed here do you know? See whether you can find out how they got started.

Do you read food advertisements? Have you ever noticed a food fallacy in any of them? Make a collection of advertisements and evaluate their accuracy.

If You Want to Know More about Food Fallacies

Read Maddox, *Eat Well for Less Money*, pp. 15–16, and Cummings, *The American and His Food: A History of Food Habits in the United States.* Complete references will be found under Some Good References, pp. 311–316.

13. HAVE YOU A NUTRITIONAL HANDICAP?

For Those Who Have Food Limitations

IF we can judge by the frequency with which we hear such statements as, "I despise oranges," "I never eat fish because I dislike it so," "I don't blame Johnny for refusing to eat eggs. I hate them myself," "My husband can't stand cabbage so I never serve it," food dislikes must be very common. And they are, but their commonness does not make them less serious.

Why do so many people talk about their food dislikes? There are many things more interesting. Surely they are not proud of them.

A food dislike isn't something to be proud of—far from it. Actually, it is a limitation, and if the dislike is for some essential food, a severe limitation.

We don't brag about our limitations even though we all have them. We try to overcome them.

And that is precisely what we should do. Our food likes and dislikes are largely the result of habit. We like foods to which we are accustomed; we dislike foods to which we are unaccustomed.

Therein lies the key to learning to choose foods wisely rather than depending on the dictation of our food prejudices.

ACQUIRING THE HABIT OF CORRECT EATING

When you know what kind of food you should eat and then select your food intelligently, the habit of correct eating is very soon acquired. It only requires continued practice, patience, and constant checking to replace bad eating habits with good. The habit of choosing food wisely, like all other habits, is fixed by repetition.

Suppose you have a dislike for some good, wholesome food that should be in your diet? One of the best ways to overcome your dislike is to try the food. Eat a few teaspoonfuls. Try it, especially when you have some other food which you particularly enjoy. Repeat the experience again and again. Take the food in different forms. You may discover that you like it after all.

Few of us like a food until we get used to it. Learning to like a food is a gradual process.

THE ADVENTURE OF ENJOYING MANY FOODS

The person who has many food dislikes misses much of the fun and adventure of new experiences with food. The same food in different forms, the food of different peoples and different times, the surprise of finding a new and liked flavor—we miss much when we fail to have such adventures.

Liking a wide variety of foods is just good sense, too. The greater variety of foods a person eats, the better are his chances of being well nourished. The more

limited he is in his food likes, the more apt he is to be malnourished.

Be up to date in your food habits! Cultivate tastes for a wide variety of foods. They serve as one indication of good training.

But suppose that you have made a genuine effort to overcome a food dislike and you have failed. Then forget it! Don't talk about it! Don't lament it! Almost everyone has at least one such limitation. The thing to do is to try to get other foods into your diet which will make up for the disliked food. You will need to apply all you know about nutrition if your body is not to be handicapped by your dislike.

This same reasoning applies to any food to which you are allergic, that makes you ill or from which you get a bad physical reaction. You must do careful nutritional planning if you are not to be handicapped severely.

FOOD PREJUDICES ARE "CATCHING"

One who airs his food dislikes not only calls unfavorable attention to himself, but he may cause prejudices in others, especially children, against a valuable food. Usually we dislike foods because our father, our mother, or some other member of our family does.

If mother dislikes cabbage, if father refuses to eat what he scoffingly calls "rabbit food," if sister leaves

her orange juice, if brother considers dried prunes "boarding-house stuff," what chance has little Willie of becoming a good eater of a wide variety of foods?

Absolutely none! He will be handicapped all his life through no fault of his own. Poor little Willie, he picked the wrong family to be born into!

Have food prejudices if you must, but don't inflict them on children.

Food dislikes may arise from poor cooking. Mrs. Randolph reported that she had great difficulty in getting her children to eat cabbage. When the matter was investigated, it was found that the cabbage was cooked an hour until it was a brown, sodden, bitter-tasting mass. When the method of preparing it was changed, the children ate it willingly.

OTHER UNDESIRABLE FOOD HABITS

One of the most seriously undesirable food habits is the elimination of breakfast or the reduction of the meal to a cup of coffee and a doughnut or the equivalent. A proper proportion of the day's supply of food (about one-third) should be taken at breakfast. When it is not, the responsibility for the adequacy of the day's food falls on the other two meals.

Unfortunately, the noon meal is also frequently reduced, and this reduction means that practically the whole day's supply of food must be taken at the evening meal. Increased fatigue is the obvious result of a

full day's work being done without taking in food to replace the energy which is expended.

One reason for the desire for cola drinks, soda pop, or candy bars in the late morning or afternoon is to make up for a lack of food at breakfast and luncheon. The substitution is a bad one because it makes a well-rounded diet virtually impossible.

Milk is often eliminated from breakfast in favor of coffee, but the trade is a bad one. The food value of coffee is nil, and milk has practically everything.

Eating too hurriedly in order to work or play is another bad food habit that many Americans have. Learn to enjoy your meals and to chew your food thoroughly instead of gulping it. From twenty to thirty minutes should be allowed for breakfast and lunch; even more time should be allowed for dinner, since it is the heartiest meal of the day.

If candy or sweet foods are included in the diet, they should be eaten at the close of or as part of a meal. Nibbling at candy between meals takes away the appetite for foods offering needed nutrients. The same reasoning applies to cokes, soft drinks, sodas, and sundaes.

What are some of the many bad results of selecting the wrong foods? Well, overweight is usually caused by eating too much, eating the wrong kind of food, lack of proper exercise, or glandular disturbances. Anyone who is overweight should diet only under the direction of a physician.

If your physician finds that your excess weight is caused by too much food, you will need to eat fewer sweets, fats, and starchy foods, but you must continue to eat fresh vegetables, fruits, milk, eggs, whole-grain cereals, and other high-protein foods.

Underweight is caused by insufficient food, lack of some of the food essentials, physical defects, such as bad teeth and diseased tonsils, or bad health habits, such as lack of sleep or rest. Underweight people usually need more rest and sleep, an abundance of fresh air and sunshine, more and better-selected food at mealtime, and perhaps between-meal lunches, which should be planned so as to interfere as little as possible with the appetite for the regular meals.

You don't need an expert to tell you that your desire for food is closely related to your emotions. A young girl in love, a young man anxious about his job, a business man about to have an important interview, a boy worried about his examinations—all may lose their normal interest in eating. For your digestion's sake, you'd better skip a meal rather than eat it when you're upset.

If we are happy and serene, we are better able to digest our food than if we are emotionally upset. "Laugh and grow fat" is a cheerfully flippant phrase, but one which is backed by some scientific proof. If you have the habit of bringing your troubles to the dinner table, you should certainly try to overcome it, both for your own and your family's sake. Whenever

possible, you should make eating a cheerful, happy time. You'll digest your food better if you do.

For this reason, too, family disagreements, stories of children's misdeeds during the day, cajoling, lecturing, excitement, and threats of punishment should be forgotten during meal time.

NATIONS HAVE FOOD PREFERENCES, TOO

Nations, like individuals, have food habits and preferences. The rice and bird's nest soup of China, the pastries of Denmark, the omelettes and crepes of France, the bacon and tea of England, the scones and pretzels of Germany, the tortillas and chili of Mexico, and, yes, the frozen foods, ready-to-eat cereals, and pies of America are all striking examples of national food preferences. As is true also of individual habits, some of these national food preferences have been detrimental to health; some have been assets.

American ways of eating are not the only good food patterns. In the food habits of many other countries are ways of eating that American families with these backgrounds would do well to retain. There are the dark breads and cheeses of central Europe, the tender shoots, green leaves, and bean sprouts of the Orient.

If you belong to a family with any of these backgrounds and wish to raise your diet to a higher nutritional level, you should not fail to keep the desirable features of your family food pattern. Begin where your family *is* in building the structure of a good diet.

Retain all the desirable food habits and modify only those that are not desirable.

In recent years Americans have changed their food habits. We have turned from the pioneer food habits of our ancestors. In some instances we have suffered for this change in tastes. There have been a marked decline in the consumption of cereals, Irish potatoes, and apples and a smaller decline in the consumption of wheat; probably most of these represent real nutritional losses. There have been a marked increase in the consumption of sugar, vegetables, citrus fruits, and coffee and a small increase in the consumption of dairy products. The greater use of vegetables, citrus fruits, and dairy products represents real gain.

Let's see how we have changed our use of certain specific dishes. Home-cooked cereals have yielded somewhat to ready-to-serve cereals; chilled fruit cocktails are replacing soup from the family kitchen; steamed and milk puddings are becoming more and more rare and ice cream and other frozen desserts more and more common; the use of crisp vegetable salads and fruit juices has increased enormously.

Some of these—the use of vegetable salads, fruit juices, and ice cream—represent real gains; some represent real losses—for example, cooked cereals, soup, and pudding.

Poor food habits can handicap an individual or a nation. Good food habits are real assets.

Some Questions to Ask Yourself

Susan's little brother never cared for cabbage until she learned to scallop it. What vegetable has some member of your family learned to eat after it was prepared in a different way?

Are there any wholesome foods which you have purposely learned to like? How did you go about doing this?

When four-year-old Joan entered nursery school, she would not eat sweet potatoes or tomatoes. After a few weeks she learned to eat them for her noon-day meal at school but would not eat them at home. Suggest possible reasons for the difference in her reaction toward these foods at school and at home.

William James clerks in a large banking establishment. He has only a half-hour for lunch. Often he is forced to stand in line at the cafeteria across the street, and as a consequence he eats hurriedly. Lately he has been bothered with indigestion. Suggest some adjustments that he can make so that his lunch hour will be less hurried.

Analyze your own food habits. What, if any, possibilities do you see for improvement? Show how you would bring about improvement.

Fourteen-year-old Tom Smith has never liked the taste of milk. His mother served his daily quota to him in such food preparations as cocoa, cream soups, custards, puddings, and creamed dishes. Since he went to camp he has been with a group of boys who drink milk at each meal and use it on cereals and with fruit. Tom is doing likewise. He explains this change by saying, "I'm always so darned hungry!" Do you think that this is the only reason for Tom's change? What other factors may enter in?

What good food practices could you learn from people of different nationality backgrounds in your neighborhood? List them and tell why they are desirable.

If You Want More Information on Food Habits

For information on our own food habits, see Cummings, *The American and His Food: A History of Food Habits in the United States.* For the food habits and needs of other countries and other nationalities, see Black, *Food Enough,* Hoyt, *Freedom from Want: A World Goal,* and Rowntree, *This Problem of Food.* Complete references will be found under Some Good References, pp. 311–316.

14. FOOD IN OUR COMMUNITIES

This is the story of a town and the people who lived there—the Bradshaws, the Varicks, the Hansens, the Browns, the Jameses, the Welches, the Schmidts, the Kregstons, the Horacks, the Martins, the Parkses, the Deans, and other people you have read about in this book.

In case you've never heard of Newberry, it's a town where homemakers are buying more leafy green vegetables these days, where neighbors cooperate in community gardens, where eighth-graders check their own diets, where high school boys and girls get up a half hour earlier to eat a good breakfast, where homemakers join together to learn how to plan good, nutritious meals for their families, where children are taken to health clinics to see whether they are well nourished, where every school child receives a good lunch at school, where many gardens grow and community canning centers are available for those who want to can cooperatively, where factories have in-plant feeding programs for their workers. But these things didn't happen overnight. They were worked for and planned for by the people in the community.

This is the story of Newberry's town-wide nutrition program.

WAR COMES TO NEWBERRY

Newberry's nutrition program grew out of the war. It might, of course, have grown out of any other community or world-wide crisis—a depression, an epidemic.

Like many another American city, Newberry found itself in the midst of a boom shortly after the beginning of the war. Munition factories, chemical plants, and an aircraft factory sprang up almost overnight. Newberry's population jumped from three thousand to fifteen thousand in a few months.

Today Newberry's citizens figure time from the day that news came of the attack on Pearl Harbor. Five Newberry boys lost their lives at Pearl Harbor, and Newberry people, once they'd recovered from their shock and grief, settled down to fighting the war in dead earnest, both on the home front and on the battle front.

War workers were no longer considered aliens in the town; now they were fellow fighters on the home front.

Newberry homes opened wide their doors and took boarders, roomers, or both. Workers were billeted in the National Guard armory, lodge rooms, club rooms, churches, empty store buildings. But even though Newberry did its hospitable best, quarters were

cramped for many workers. Some were forced to live in tents or trailers.

Schools were overcrowded, too. Two of the six elementary schools were forced to run on a double shift to take care of all the children who came.

AND ADJUSTMENTS ARE MADE

Gradually, things became more settled. Many workers moved into two large war-housing projects at the edge of the town; two large markets were built between them. At the edge of the housing projects, a large area for community gardens was set aside.

Newberry is still hustling, however, and will probably continue to hustle for some time to come. All of the factories are now making things for better living in a peaceful world. It is plain that Newberry will never return to being a little town; factories are there to stay. Many mothers are still working in the factories. Many children in the upper elementary grades or high school still share the responsibility for family meals and younger children.

If you were to stop a man on the streets of Newberry and ask him about the town's nutrition committee, you might be told, "I've never heard of it in my life." But whether they know it or not, there are few people in Newberry who haven't been affected in one way or another by the nutrition program sponsored by the fifteen people who made up the committee.

THEN NEWBERRY DISCOVERS IT HAS FOOD PROBLEMS

How did Newberry happen to form this committee in the first place? Were its people more thoughtful than people in other communities? Were its food problems more severe?

No, Newberry is an average American community. Its people are fairly typical of those in other towns; its problems much like those of other communities. What Newberry did, any community can do. But let's get on with our story.

Shortly after the beginning of the boom a whole series of disturbing things happened. Teachers reported that many children were coming to school without breakfast and that many youngsters were listless and uninterested in school work, and one epidemic of colds followed another. The factories had a high rate of absenteeism and accidents. Doctors were overworked, and many people were ill or under par. People began to wonder whether all these disquieting conditions could be related, and if so what the community could do about them. What could and should they do as individuals?

Actually, however, it was a group of high school boys and girls who stirred things up, who started the agitation which finally resulted in the establishment of a community-wide nutrition committee.

AND DOES SOMETHING ABOUT THEM

HIGH SCHOOL STUDENTS WANT INFORMATION

First the class in community living selected food as their next project. Then still another group of high school students decided that they needed more information about food. Most of the boys and girls in this group had heavy responsibilities at home—preparing meals, marketing, caring for family gardens, looking after younger children.

They did all these tasks willingly enough. But many of them felt that they didn't do them as well as they wanted to. As one of the boys put it, "My sister Meg and I find meal getting and food buying a tough assignment. The other day Mary Jane Rhodes told us how much Mrs. Martin had helped her with these jobs. Well, a bunch of us talked things over among ourselves. We knew, of course, that Mrs. Martin couldn't help all of us. She was much too busy for that. But perhaps there were other people who could help. Then Meg suggested that we talk the problem over with Miss Hanson, the home economics teacher at Central High.

"Miss Hanson agreed that we needed help. She thought, too, that there were a lot of people in town who could help us. She felt sure that Dr. Carrol and the public health nurses at the Health Department would be willing to talk to us about the importance of good nutrition for health and would help in other ways. Miss Hanson would help us in planning good meals for our families. Maybe Mrs. Martin would

be able to talk to us as a group about marketing. And Bob Brown was an expert gardener.

"Miss Hanson was already helping the students in her regular classes, such as the one in community liv-

Talking it over with Miss Hanson.

ing, with their food problems, but these classes were either too full or we couldn't fit them into our schedules. So a special short course was set up just for us."

FATHERS AND MOTHERS DECIDE THEY NEED A CLASS TOO

Then the high school boys and girls began going home with enthusiastic reports of what they were doing and learning. A group of senior boys formed a club

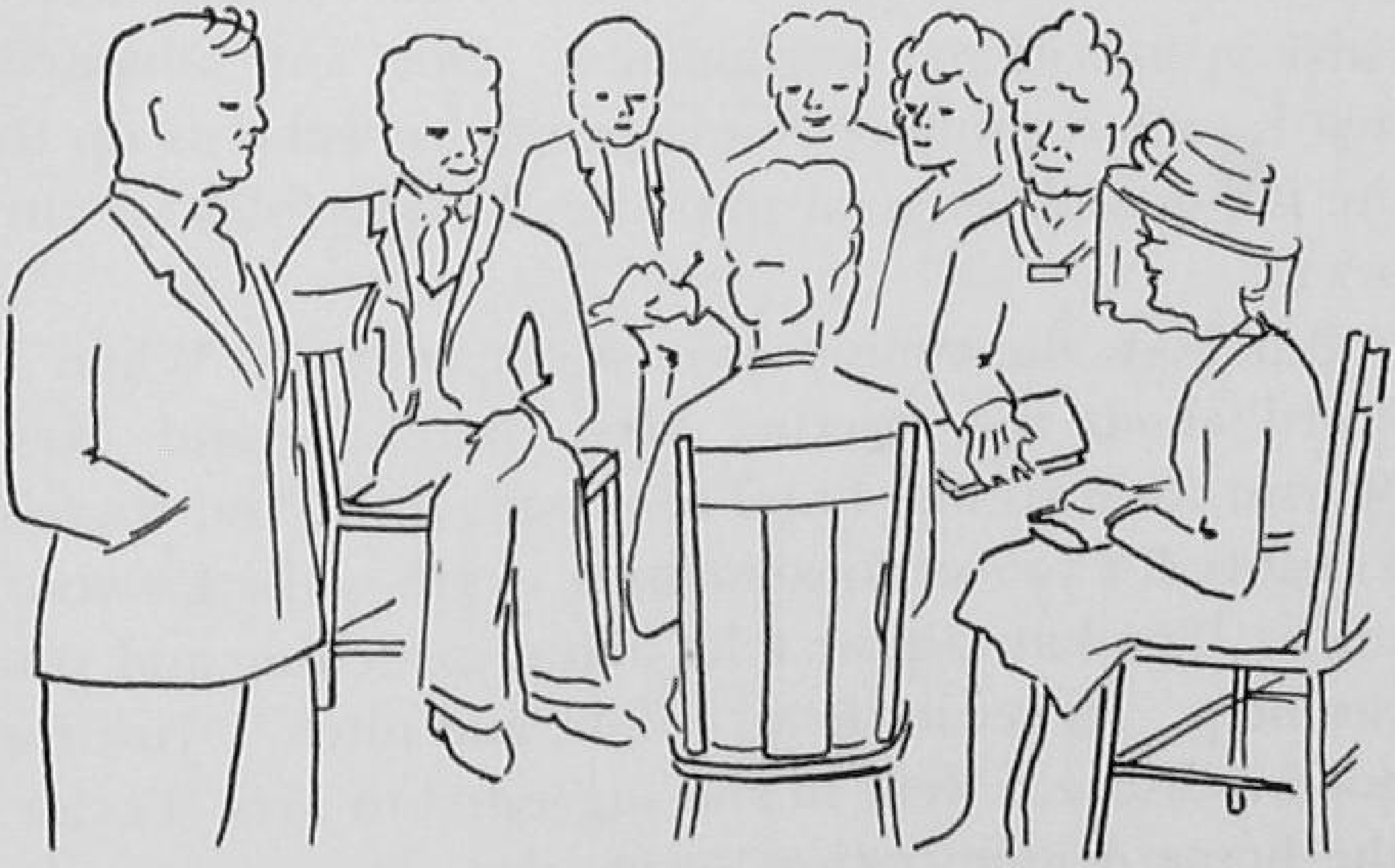
called the "Doughboys," their purpose being to learn how to cook. Newberry was waking up. Other people discovered they had nutrition problems. A clamor arose for more nutrition classes.

The Doughboy Club.

Obviously Miss Hanson couldn't teach the whole town. And, anyway, Newberry's nutritional problems were so widespread and so varied that a community attack was necessary. Mrs. Martin and Mrs. Bradshaw decided to ask a group of interested people to meet at the city hall to discuss just what they thought should be done.

A COMMITTEE IS FORMED

And so it happened that a small group of people who were genuinely interested in better nutrition for their community came together to talk over the community's problems. Dr. Carrol explained his interest



Newberry plans for better nutrition.

by saying, "We doctors can't hope to keep the people in this town well as long as there is a single neighborhood in our town where many people are not getting enough of the right kinds of food. The whole town suffers if any group is below par."

Mrs. Martin said, "Working with Mary Jane was an eye-opener to me. I got to wondering how many young people—and older people, too—were faced by food problems which were quite beyond them."

Miss Gardener, a teacher, added, "I have a lot of youngsters whose parents are working in the factories. It seems to me they get thinner, more listless, and harder to teach every month. I've begun to suspect that many children in my room are undernourished."

Fred Rowan, the superintendent of schools, said, "When the youngsters in Central High became interested in nutrition I was amazed. Now I'm ashamed that it took a group of young people to wake us up to the importance of good nutrition for the folks in our town."

Bill Post, the county farm agent, added, "When I heard about the meeting Mrs. Bradshaw and Mrs. Martin were calling, I said to myself, 'Bill Post, there's a chance for you to do something worth while for your town. You know quite a lot about gardening and you can help. So get in there, fellow, and pitch.' Just for good measure, I went in and suggested to Mrs. Taylor, the home demonstration agent, that she come to the meeting too. But she was already busy working with Miss Hanson on plans for the meeting."

Mr. Levering, the banker, stated, "I'm a business man. I pride myself on being practical. Well, good nutrition for everyone in Newberry strikes me as not only a fine ideal but also good sense."

Mrs. Welch, a worker in one of the factories, declared, "I've been thinking about absenteeism at the plant and the fact that so many of us haven't a chance to get a decent meal. I've decided that nutrition is at the bottom of the trouble. If high school youngsters

have food problems with which they need help, we factory workers do too."

A mother added, "I came because my little girl doesn't eat as she should and she's so thin I'm worried about her. Dr. Carrol tells me that it may be the way I cook the food I give her."

The P.-T. A. begins a survey.

All these people were very busy. Some were well off financially; some were not; some had studied nutrition in school or in extension courses; some had not. But all were willing to give time to a community nutrition program.

Fifteen people from the group were selected for the over-all nutrition committee. Mrs. Martin was elected chairman. The committee included parents, teachers, a welfare worker, a public health nurse, a doctor, a dentist, a worker in the plants, a plant manager, the farm and home agents, the secretary of the chamber of

commerce. Practically every organized group in the community was represented.

Then the committee went to work and things began to happen. A house-to-house survey was made by the Parent-Teacher Association in an effort to discover just what the food problems in the community were.

Teachers talked to children. How many children had had breakfast before they came to school? Many children had not. Teachers observed that some of the children were so hungry that they ate the meager lunch they brought from home in the middle of the morning, then had nothing more to eat until night. Many of the children were undernourished. Certainly many were underweight.

A NUTRITION CLINIC IS HELD IN EVERY SECTION OF THE CITY

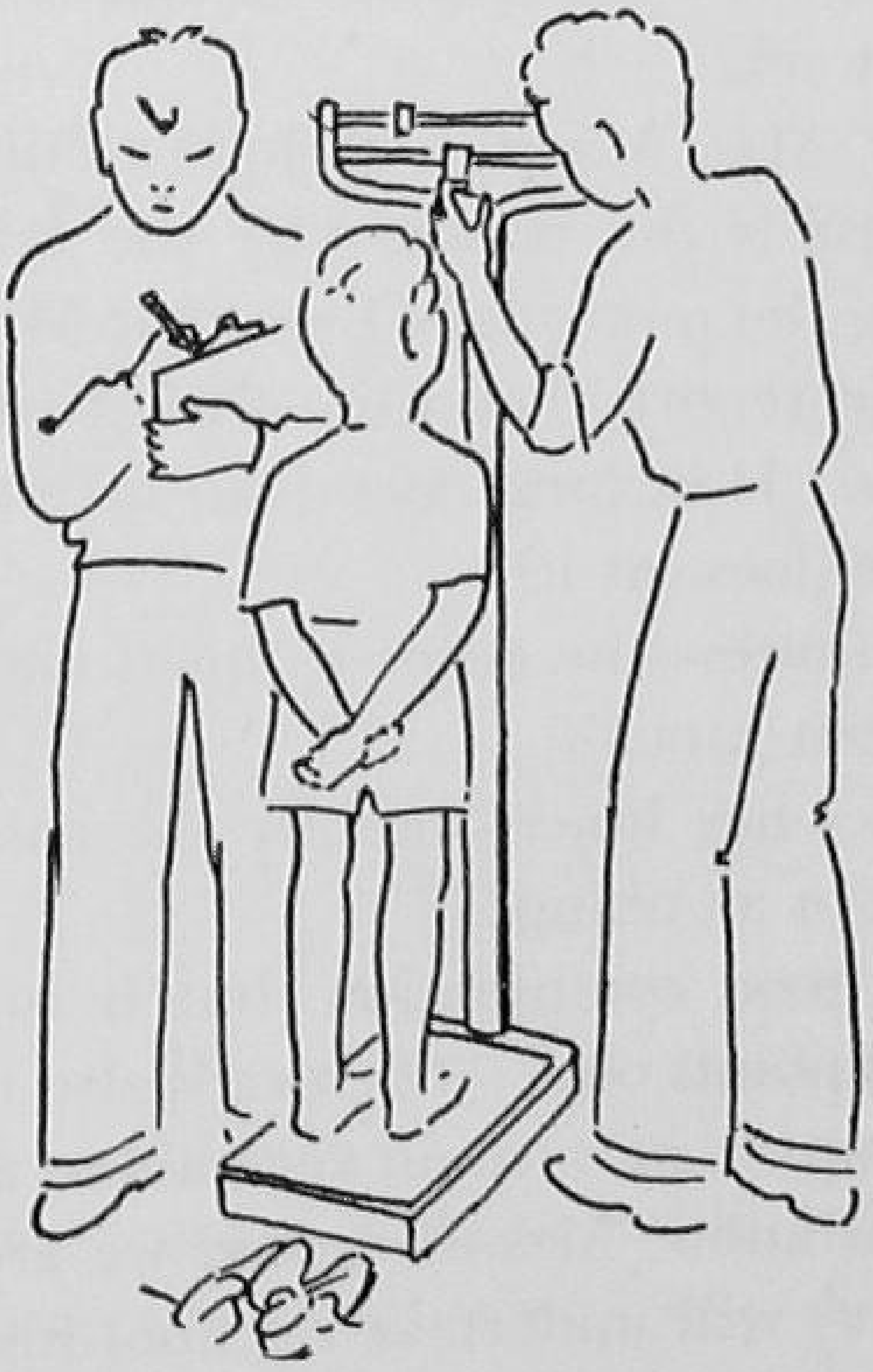
Information on the extent of undernourishment was needed. Why not hold a nutrition clinic? Could busy doctors and nurses find the time? They could and did.

But they would need help. A group of high school boys offered to help with the weighing of all the youngsters from their neighborhood. Mothers organized to bring children to the clinics. Fathers offered to help in taking records.

Teachers handed in the names of youngsters who they felt were not up to par physically. Parents were invited to come to the clinic when the children were examined by the doctor. Some parents wanted their children examined, even though the teachers hadn't reported them.

After the examination a trained nutritionist talked to the parents. But let's look into one of the clinics.

Mrs. John Murphy is there with Joan, a little girl of seven. Joan has been examined by the doctor, who



High school boys help the doctor at the nutrition clinic.

reports that she is anemic. Miss Holmes, a trained nutritionist, sits down to talk things over.

"What do you eat for breakfast, Joan?" she asks.

"Milk and corn flakes," Joan answers.

"When she eats breakfast at all," her mother murmurs. "Sometimes she doesn't get up in time to eat breakfast."

Miss Holmes says to Joan, "Well, that's a good *start* for a good breakfast. But it isn't enough! A little girl like you needs also a glass of orange juice or tomato juice or some other fruit, whole-wheat toast or toast made out of enriched bread, and an egg at least three or four times a week.

"I wonder, Mrs. Murphy, if Joan's failure to eat a good breakfast is the reason why she falls asleep in school during the morning? I see that Miss Rutledge, Joan's teacher, reports that quite often Joan is too tired to stay awake. How long does Joan take to eat breakfast when she does eat it?"

"Three minutes—she gulps it down and runs."

"What about lunch?"

"She carries her lunch—usually she has a sandwich and an apple or an orange."

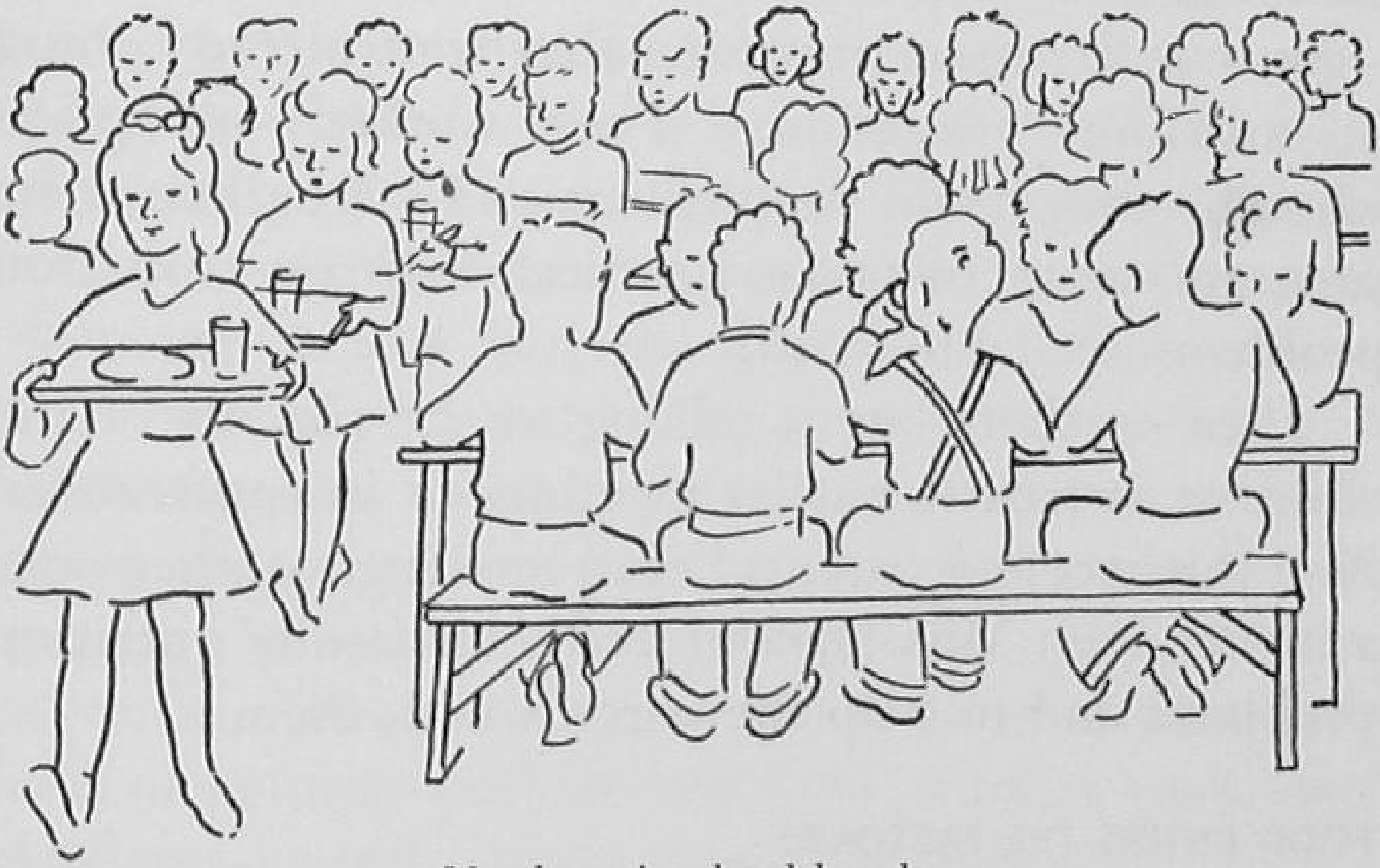
"That's a good combination, but it isn't enough," Miss Holmes points out. "She needs also milk in some form, hot soup or stew, some vegetables, and a simple dessert. You know, Mrs. Murphy, we are all hoping that Newberry will undertake a school lunch program as a result of these clinics. Then all the children in Newberry will be able to have a good noon lunch at school."

A SCHOOL LUNCH PROGRAM GETS UNDER WAY

And that is precisely what happened. As soon as Newberry knew that many children were undernourished, people wanted to do something about it. Everyone felt that the best investment Newberry could make

for its present and its future was to see that its children were well fed.

So a school lunch program was started. The school board and the Community Chest contributed funds. A school committee of teachers, parents, and older



Newberry's school lunch.

children was organized to plan and divide responsibility for serving and preparing food. Gardens were planned, tended, and harvested, and the harvest canned for school lunches.

Next, nutrition education was incorporated into the schools. Every teacher in Newberry's six elementary schools began teaching nutrition—the importance of a good diet, the way to determine whether meals are good meals, and the reasons why food must not be wasted—not as a separate school course, but along with the regular class work. "You don't have to be an expert to

teach youngsters about nutrition," Miss Ratoff, the elementary supervisor, told the teachers, "but you do have to believe in the importance of the job and your ability to do it."

A group of high school teachers—home economics, business, health, agriculture, science, and social studies—got together to see just what they were already doing in nutrition education. They worked out plans whereby they could supplement and strengthen their program so as to make practical help on nutrition problems available to all.

Then teachers began talking to the parents of the children at parent-teacher meetings or in conferences. And teachers and parents began meeting together once a month with Miss Hanson to discuss family nutrition problems and to help the parents with them.

FOOD ENTERS THE FACTORIES

Then the interest in good nutrition spread to the factories. People in the factories were conscious of the fact that they had had nutrition problems—severe ones—for a long time. Some were sure that many of the accidents occurring at the plant were due directly or indirectly to poor eating practices.

It was really quite difficult to get good food at the plants. When meal time came, only a handful of workers could eat in the few lunch places near by; most of the workers must bring their own food.

Even the few who succeeded in getting into the lunchrooms could scarcely feel well nourished with

the meals they found. An average menu consisted of hamburgers, hot dogs, sandwiches, coffee, and thin cuts of pie.

Those who brought their lunches ate them on the job in the factory or in the factory yards, sitting on boxes or curbstones. Most "carried" lunches were inadequate, consisting only of sandwiches.

A delegation of workers went to the nutrition committee to see what could be done. The committee referred them to an industrial nutritionist who came to the plants to look over the situation and to interview both management and labor.

Management agreed to build cafeterias in or near the plants and to hire dietitians and cooks to plan and prepare the meals. Workers agreed to patronize the cafeterias. The nutrition committee worked out many ways of helping workers and their families with food problems—posters, study groups, movies.

Now workers eat in the cafeterias, where the average meal consists of meat, potatoes, one other vegetable or a salad, fruit, pie or cake for dessert, enriched bread and butter or margarine fortified with vitamin A, coffee or milk. Workers get their meals very reasonably. Management finds that the meals pay big dividends in increased production, fewer accidents, and reduced absenteeism.

GARDENS GROW IN NEWBERRY

Bob Brown was made chairman of the subcommittee placed in charge of gardens. Bob was an experienced

and enthusiastic gardener himself, and he gathered around him many other gardeners who were willing and eager to help promote gardens in Newberry.

It was then that they ran into their first hurdle. Many families in Newberry were anxious to have gardens. But very few families had space to have one.

Actually the search for space took much time, but finally ground for community gardens was secured at each edge of the town, and each would-be gardener was allotted a plot of his own. All these plots were within walking distance or a short bus or auto ride of the homes.

Ed Newton, the agriculture teacher, arranged to have his students plow the land. Newberry's community garden project was under way.

Every organization or person able to instruct or advise on gardening or processing the harvest of gardens was asked to assist. Newberry's gardeners soon discovered that making a garden was something like making a bridge; they needed to know where to start and where to finish. They needed to figure out in advance just what the "nutritional load" of their gardens was going to be and how to plan to accommodate this load.

Bob and his little band of experienced gardeners helped the new gardeners calculate the vegetable needs of their families and decide just how much of this requirement they were going to raise. Nutrition classes began discussing the problem, too. Many were amazed

to discover that gardens could be planned to produce bountifully throughout the growing season.

The committee did many things to arouse the interest of the community in gardening. Experienced gardeners talked on gardening; garden posters appeared in downtown stores; newspaper pictures of the products of gardeners who obtained fine results were featured in papers.

But Bob and his committee didn't stop with gardening. They couldn't. They realized that community canning centers were needed if families and schools were to be able to get the maximum benefit from their gardens.

And so it happened that ten canning centers were started and ran to capacity all summer and far into the fall.

At the end of the season, all the gardeners in Newberry felt that they had taken a blow at the enemy—malnutrition—and so they had.

OTHER NUTRITIONAL PROBLEMS ARE MET

It would be impossible to describe in detail all the other activities of the people of Newberry in their attack on the nutrition problems in their community. Some of them, however, are worth listing:

1. Nutrition clinics were finally opened to adults as well as to children.
2. Classes and demonstrations in canning and food preservation were given throughout the community.

3. The local newspaper and radio station featured food in their articles and programs.

4. Community canning centers were made available in every section of the town, and a great deal of food was canned cooperatively for families and for the school lunch program.

5. Food study groups were organized throughout the town for both men and women.

6. Posters stressing the importance of eating food from each of the basic seven groups were made and placed in school, plant, and public cafeterias and restaurants.

7. The local theaters ran "shorts" featuring good food practices.

8. A local workshop in nutrition for teachers was held under the auspices of the state university.

9. A group of women cooperated with the grocers in planning to stock the foods which would be in demand as a result of the emphasis on good nutrition.

10. Another group of townspeople studied the eating places in the community. They suggested to the managers of such places ways in which they could achieve better standards of food preparation, cleanliness, and service.

11. Some children received breakfast as well as lunch at the school.

12. A nutrition course was organized for prospective mothers.

Mr. Ralph Homer, the mayor of Newberry, expressed the feelings of many of its citizens when he said, "I believe that Newberry will continue to have a well-planned nutrition program for many years to come. It would be unthinkable ever again to permit the nutrition of our people to be subject to the hazards of chance. We must hold fast to every gain we have

made. The welfare of the people of Newberry demands it."

Newberry is just one community in the United States. Many other communities are awake to the possibilities of and the necessity for a concerted drive against the forces of hunger. The story of Newberry suggests many things we could or should be doing in our own communities. Actually, of course, the ways and means for achieving good nutrition for everyone will vary from one community to another. But always there will be opportunities for service.

The better you are able to solve your own nutritional problems and the more scientifically you do the job, the more you will be able to help the people in your community.

Look around you. There is much that you can do now and in the future.

Some Questions to Ask Yourself

Are there any groups of people in your community who are helping other people have better meals? What are they doing?

How can you increase the number of gardens in your community? How would you go about organizing a campaign against waste?

Have you tried to interest other people in your community in better meals? What would you think of making posters, producing radio shows, writing newspaper articles?

How many schools in your town have school lunch programs? Are there other schools that need them? Could you help make the schools more successful in teaching boys and girls better food habits?

Find out whether there is legislation in your state regarding enriched flour, bread, corn meal flour and corn meal grits, and fortified fats. What are the provisions of the laws regarding these items?

If You Want More Information on How to Plan a Community-wide Nutrition Program

See the Federal Security Agency bulletin entitled *Democracy Means All of Us*, and the United States Department of Commerce bulletin, *Small Town Manual for Community Action.* Complete references will be found under Some Good References, pp. 311–316.

15. FOOD AROUND THE WORLD

ONE of the freedoms guaranteed by the Atlantic Charter is freedom from want. The first want of every human being from the time he begins life is food.

Human beings as a whole the world over have never had enough food.

We Americans are used to thinking that we have a relatively high level of nutrition. And so we have, in comparison to many other peoples of the world.

But, compared with the standards set by modern nutrition, as a nation our level of nutrition is far from high, for only one-third of our people are well nourished.

Elsewhere in the world there are areas where many millions of people live so closely crowded together that each family has only a tiny piece of soil from which to coax a meager living. Children are pot-bellied and rickety, women die in childbirth because they are unable to nourish another life, men succumb to disease while still young. Let failure happen to a single crop, and the whole countryside perishes from starvation.

Not a pretty picture, is it? Surely these are unusual conditions growing out of war, depressions, or catastrophes like floods, earthquakes, tornadoes. But they are not. They are normal for vast areas of the

earth and many millions of people. Catastrophes merely make them prevail for additional millions.

Whose fault is it? The fault of nations and of men.

CAN ALL PEOPLE BE WELL FED?

Surely this generation—a generation of men who can fly around the globe, who can pick music up out of the air, who can control many of the diseases which have always killed human beings, can arrange the affairs of the world so that all the peoples in the world can have nutritious food.

It can and, if the signs of the times have any significance, it will.

Perhaps the most hopeful indication of international effort for this purpose was the United Nations Conference on Food and Agriculture, which met at Hot Springs, Virginia, May 18 to June 3, 1943. In effect, this conference wrote a new declaration of independence—independence from starvation and near starvation for the peoples of the world.

Sitting down together, the representatives of many nations wrote a charter for another birth of freedom—freedom from hunger. "This conference, meeting in the midst of the greatest war ever waged . . . has considered the world problems of food and agriculture and declares its belief that the goal of freedom from want of food, suitable and adequate for the health and strength of all peoples, can be achieved."

But if freedom from want of food—the first step to-

ward freedom from want—is to be attained, national action in every country and international action to assist countries lacking all the resources will be required to bring about improvements in food production.

Countries with relatively rich land resources in proportion to their population will need to increase their food production for export, and those of opposite description must expand their production of manufactured goods. Relatively unrestricted international trade must distribute the goods of both economies. In this way the peoples of the world will get the most food out of the world resources with the least toil. Starvation will be banished from the earth.

Utopia? Perhaps, but a Utopia within our reach if nations and men will work together to attain it.

And where do you come into this picture? You and millions like you are the picture, for you can make it possible.

As a person, what can you do to achieve freedom from hunger for everyone in the world? You can do much.

1. You must first of all appreciate the fact that the welfare of all peoples is interrelated. Freedom from want of food in one country is closely related to and dependent upon freedom from want of food in other countries.

Let's look at a few specific examples. Adequate nutrition in Italy, Spain, and Portugal will require great improvements in agriculture, together with interna-

tional assistance. In western Europe the attainment of this goal will require a shift in agriculture to produce more milk and other dairy products, vegetables, and fruit.

The United Kingdom and Belgium will need to exchange manufactured goods for food. Canada, Australia, the Netherlands, New Zealand, and Argentina have ample food resources—enough so that they can export large quantities in return for manufactured goods.

Because of its vast resources for growing food and manufacturing, the United States will need to export both foods and goods and to accept other foods and goods in exchange.

In parts of eastern Europe, and more markedly in India and China, improvements in agricultural production, no matter how great, cannot meet the need for food. Without great developments in industry so that goods may be exchanged for foods, freedom from hunger cannot be obtained for these peoples.

The industrialization of China and India would provide markets for the essentially agricultural countries of Indonesia and southeastern Asia, which in turn would purchase manufactured goods from their northern and western neighbors. So it goes like a vast jigsaw puzzle, the pieces fitting together to form freedom from want of food all over the world.

2. As an individual, you must endorse international cooperation and work for ways and means for your own nation to cooperate with other nations on this

problem. You must speak and work for international effort. You must encourage your newspapers and radios in their sponsorship of it. They are responsive to public opinion, and you and others like you make public opinion. Here is your task at the international level—you must make the need for international co-operation so apparent that it cannot be denied.

3. And, in addition, you must be willing to work and work hard in making the adjustments necessary in your own country and in your community.

THE SCIENCE OF NUTRITION POINTS THE WAY

Scientists now know for the most part the kinds and amounts of food required for health. Advances made in this field in recent years have shown that enough food of the right kinds will not only do away with diseases due to dietary deficiencies but will also greatly reduce sickness and death from other causes.

The diets consumed by the greater part of the population in every country are inadequate. In some parts of the world, people have always relied on diets that are largely a combination of cereal and vegetable foods. Others have lived almost entirely on animal products. Few have had diets that were a happy combination of both. Poverty, poor food habits, and lack of knowledge of good food selection have all contributed to this situation.

The conferences held in Geneva between 1935 and 1939 under the auspices of the League of Nations

called attention to the significance of the science of nutrition for world planning. The conclusions reached as a result of these conferences can be summarized as follows:

1. The provision of food adequate in quantity and quality would have a more profound effect upon world health than any other single reform.
2. Nutritional science can lay down optimum standards for any country.
3. The application of science to agriculture would enable us to provide all the food required.
4. The adoption of sound nutritional standards on a world-wide basis would have a highly favorable effect on world agriculture and on world trade.
5. The accomplishment of these aims requires international coordination.

The challenge, then, is to develop food plans for each country that will insure proper nourishment and at the same time be palatable, acceptable to the tastes and habits of the people, and suitable to production and distribution resources. World production of food will need to be increased materially and distributed better.

This program will mean adjustments in every country and in every community. Your country and your community will not be excepted.

WHAT MUST AMERICA DO TO ACHIEVE FOOD FOR EVERYONE?

There are many difficulties to overcome before freedom from want of food can be realized, even in our

own country. In addition to cooperating on an international basis, we will need to make some adjustments on a national basis.

As a people we will have to make certain adjustments in our production and distribution of food. Here are some of the things we will need to do as a nation:

1. Produce as much food as possible for direct human consumption, emphasizing cereals, beans, peas, potatoes.
2. Convert all available grass and forage into dairy products first and beef and mutton second.
3. Use any land not needed for producing direct human food crops by growing feed grains, first to supplement the grass and forage and second to feed hogs and poultry.
4. Supplement the vitamins and minerals that will be provided by the foregoing by maintaining existing orchards, particularly citrus, prune, peach, and apricot orchards, and by growing such acreages as are needed of the more productive vegetables, such as carrots, tomatoes, kale, beets, peas, beans, and greens.
5. Use any left-over or part-time labor for poultry production and vegetable and fruit-growing.

Just what will these differences in the production of foods mean to us as a people? They will mean that we will have to make adjustments in our food habits in our homes and in our communities. For the immediate future, the more important of these are:

1. We will need to get more of our nutrients from grains, vegetables, and fruits and less from meat and livestock products.
2. We will need to get the necessary animal proteins less from meats and more from milk and eggs.

3. We will need to get more of our proteins from beans and peas, soybean flour and grits, peanut butter, and whole peanuts.

4. We will need to get more of the fats and oils in our diets from vegetable sources such as cotton seed, peanuts, and soybeans.

5. We will need to eat more of the nutritious vegetables which are produced with least labor, like tomatoes, carrots, cabbage, snap beans, beets, spinach, kale.

6. We will need to eat more potatoes.

7. We will need to eat more fruits.

And this is where you come in. The world and the nation are only aggregates of communities. The world will be able to make the adjustments necessary to assure freedom from hunger in direct proportion as success is achieved in making them in all the communities of the world.

The final and decisive battle for freedom from hunger will be fought in communities.

If the struggle for freedom from hunger is to be won, every community in America—for that matter, every community in the world—will need to have an effective plan for routing hunger from its streets and homes. How one community did it is described in Chapter XIV. How your community does it will be determined by people like yourself.

As we go forward in the struggle for freedom from hunger, let's remember: "An adequate basic food supply builds strong and peaceful nations. A scanty food

supply makes a weak and quarrelsome people. These things have always been true." *

And they will always be true. For the question of food—the adequate nutrition of all the world—is at the very heart of the problem of peace, and the way that problem is handled may decide the course of history.

The way is up to you and millions like you.

* Roy F. Hendrickson, speech at United Nations Conference on Food and Agriculture.

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